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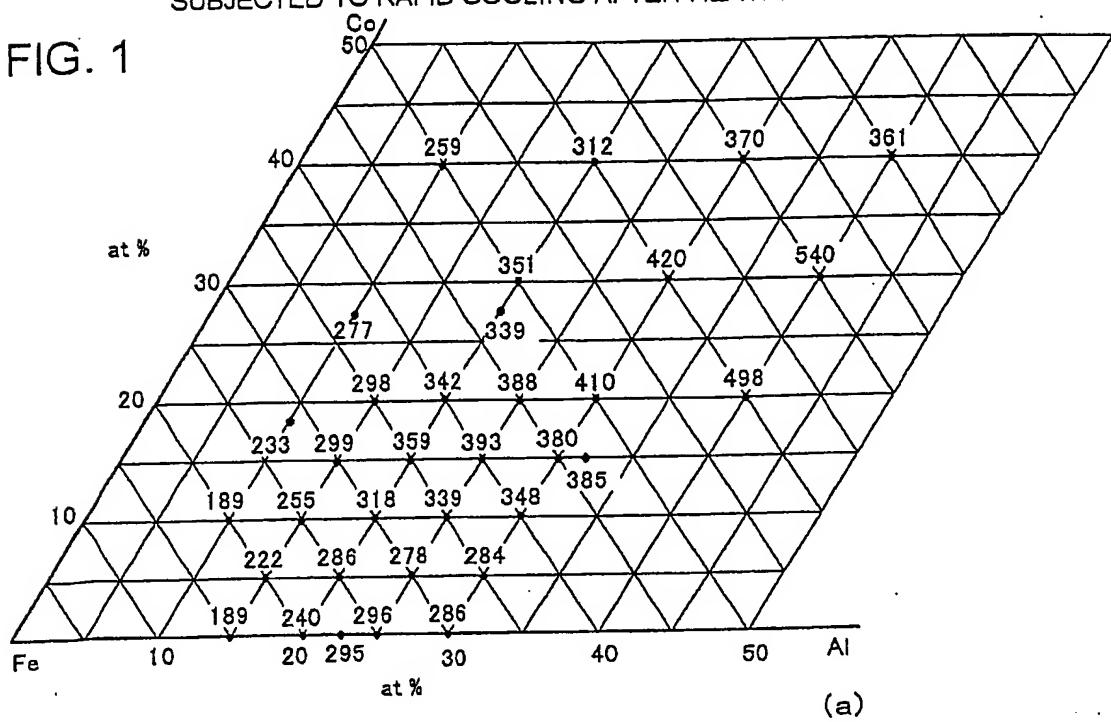
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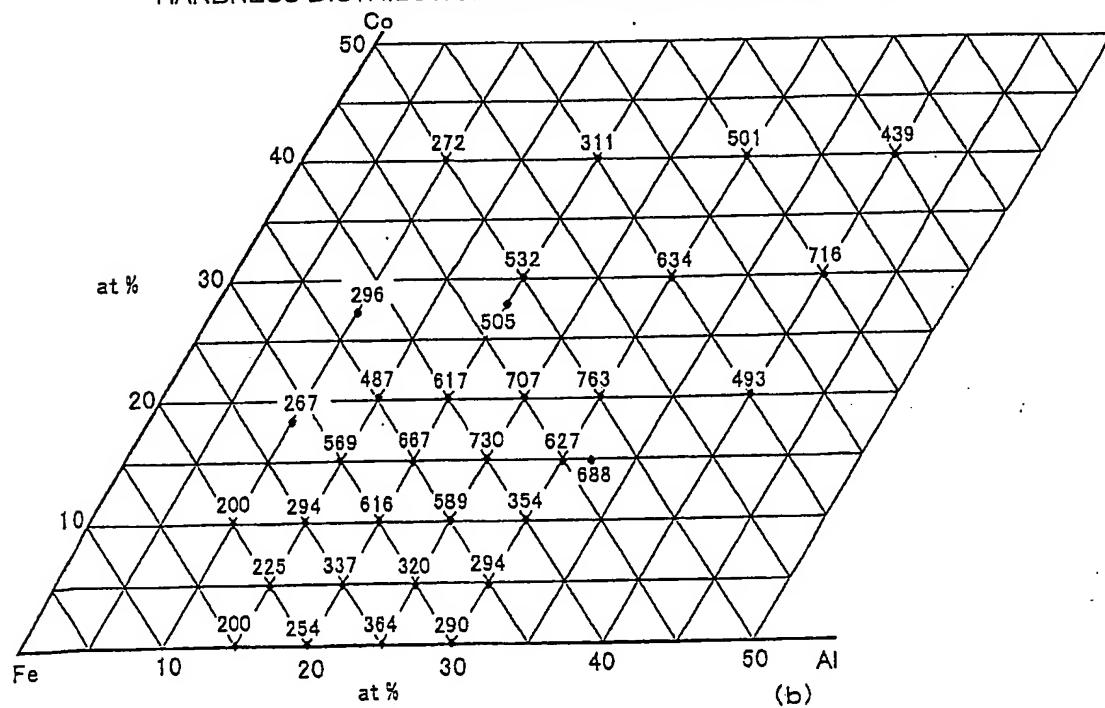
HARDNESS DISTRIBUTION WHEN Fe-Al-Co TERNARY ALLOYS ARE  
SUBJECTED TO RAPID COOLING AFTER HEATING AT 1,200 °C

FIG. 1



(a)

HARDNESS DISTRIBUTION WHEN 10-HOUR AGING IS DONE AT 600 °C



(b)

FIG. 2

EFFECT OF ADDITION OF Co UPON HARDNESS OF Fe-Al ALLOYS

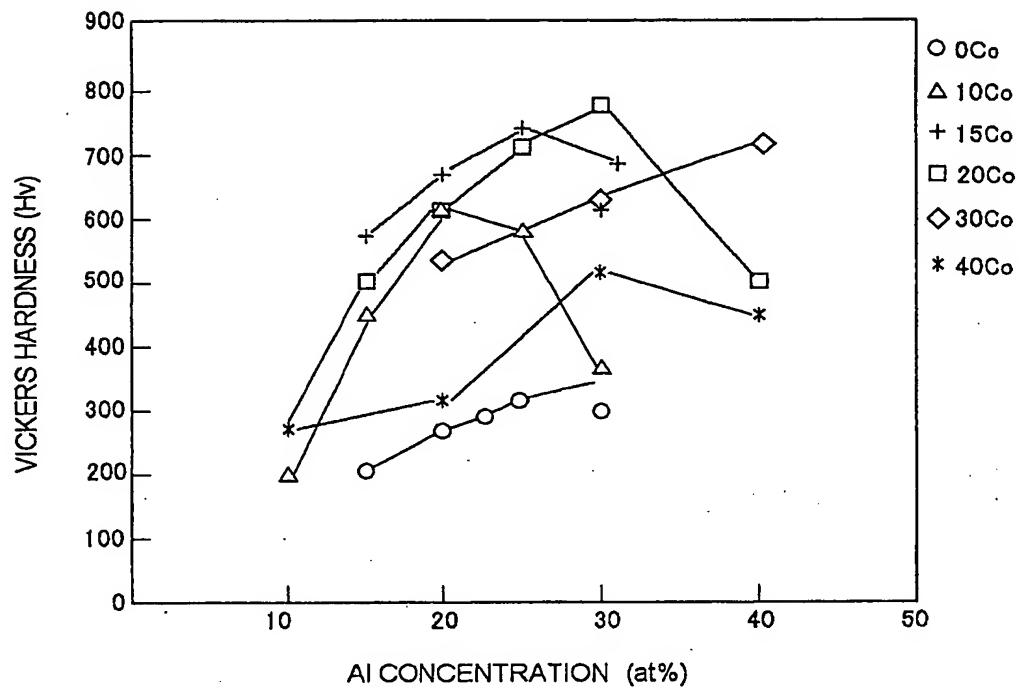


FIG. 3

CURIE TEMPERATURE OF Fe-Al-10AT% Co ALLOYS

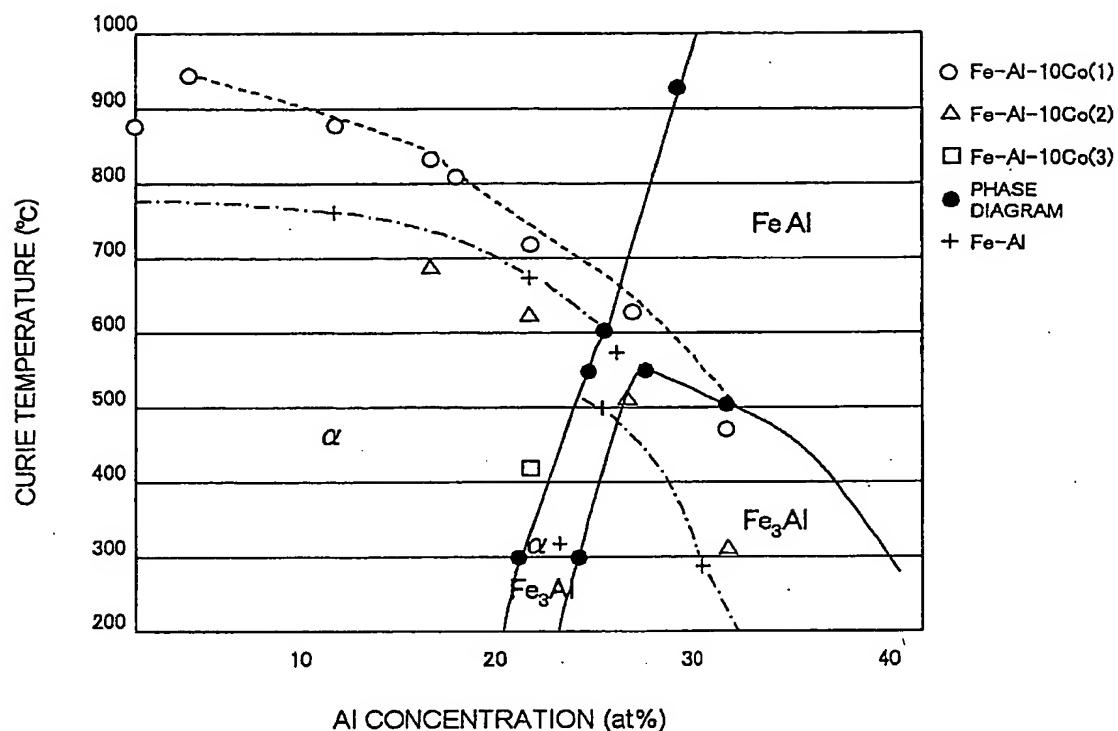
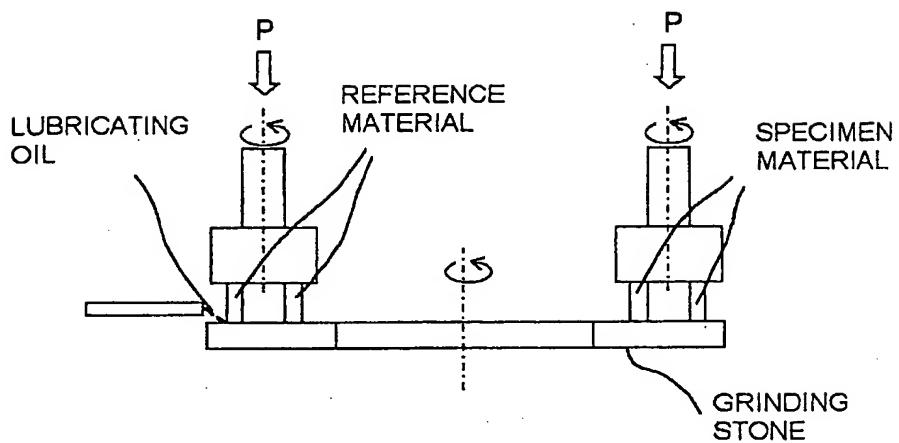


FIG. 4



LOAD: 100kg  
ROTATIONAL SPEED OF GRINDING STONE: 60rpm  
ROTATIONAL SPEED OF SPECIMEN: 10rpm  
LUBRICATING OIL: #30 OIL  
AMOUNT OF LUBRICATING OIL: 5cc/min  
REFERENCE MATERIAL: S45C QUENCHED AND  
TEMPERED MATERIAL  
( $H_v=500$ )

FIG. 5 HARDNESS OF Fe BASE ORDERED PHASE MATERIALS VERSUS THEIR ABRASION RATIOS

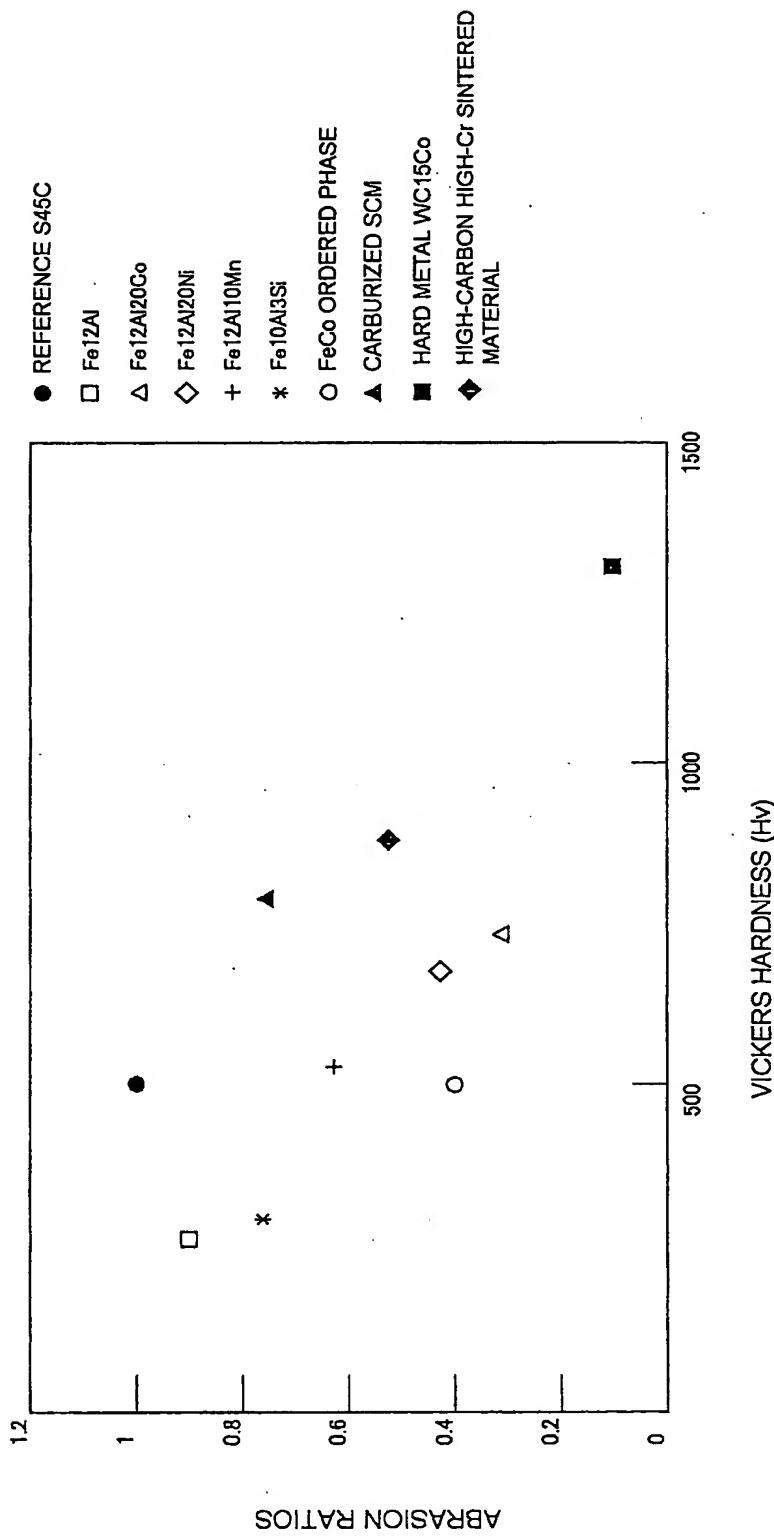


FIG. 6

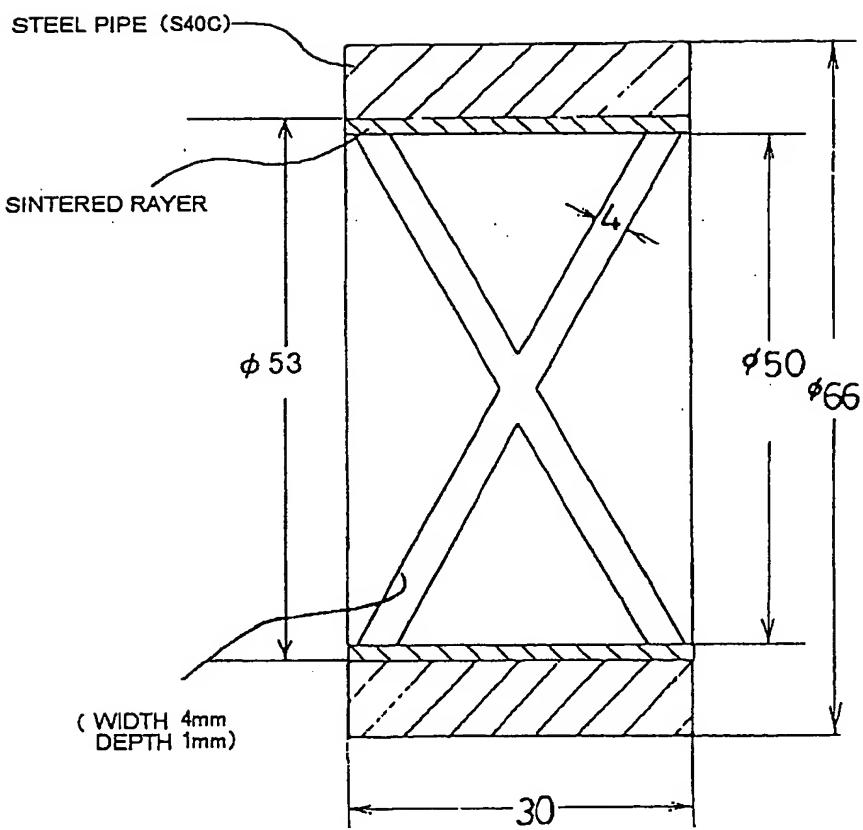


FIG. 7

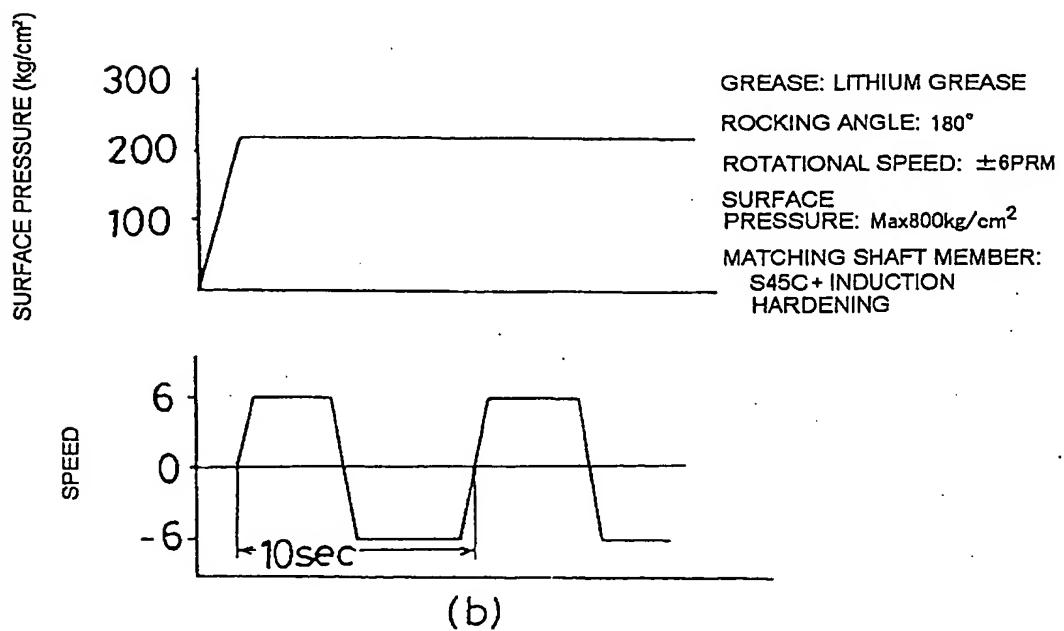
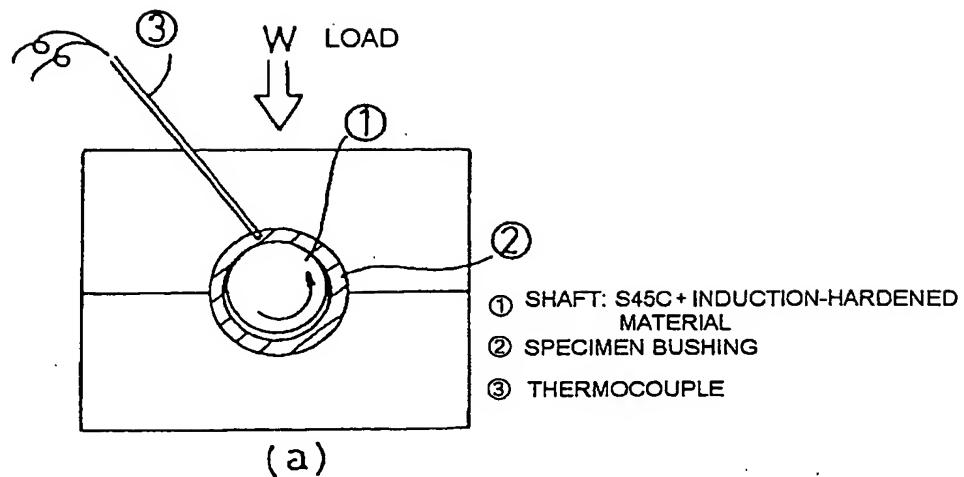


FIG. 8

COEFFICIENTS OF SLIDING CONTACT FRICTION  
OF Fe BASE ORDERED PHASE MATERIALS

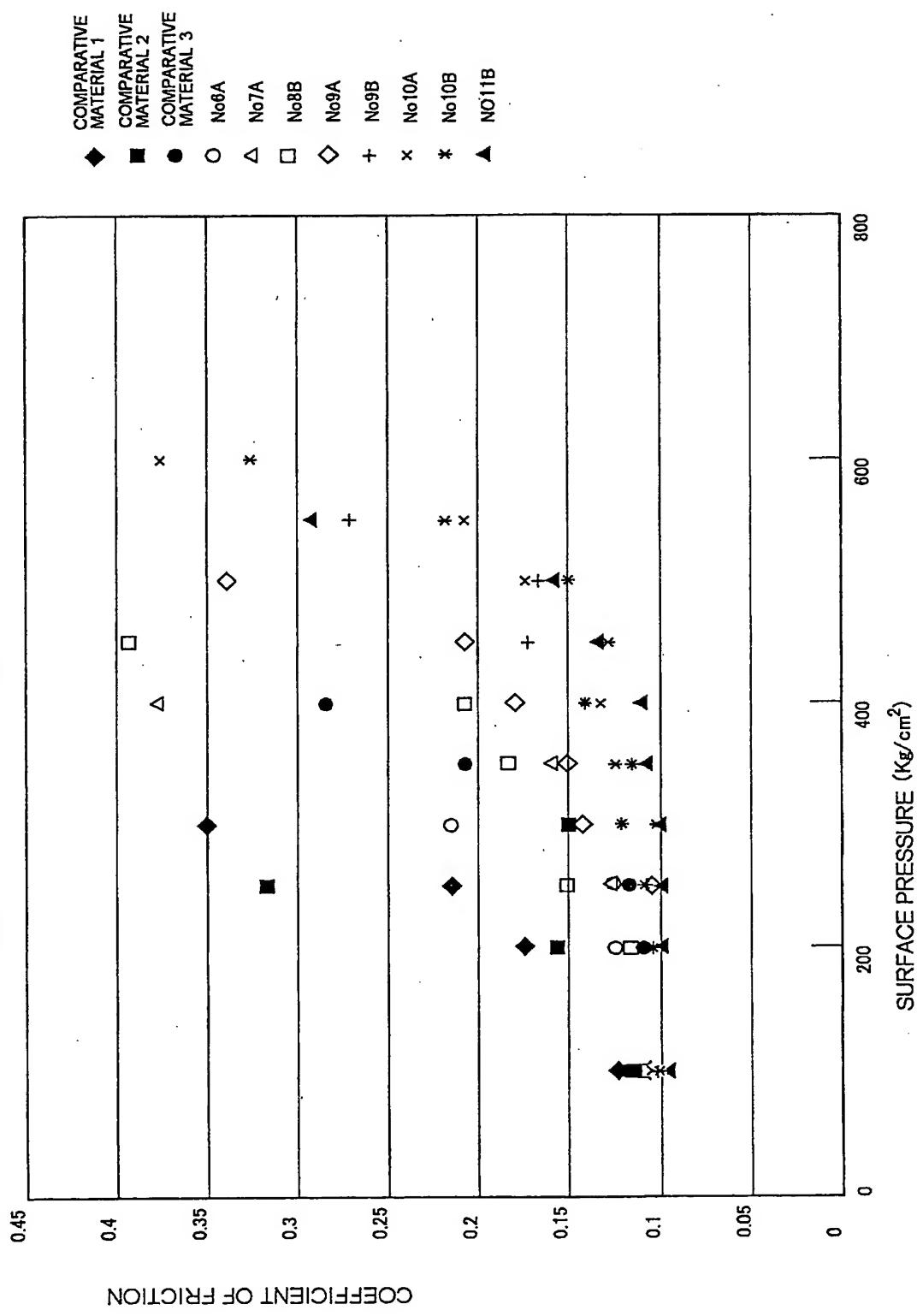


FIG. 9  
SLIDING ABRASION AMOUNTS OF Fe BASE  
ORDERED PHASE MATERIALS

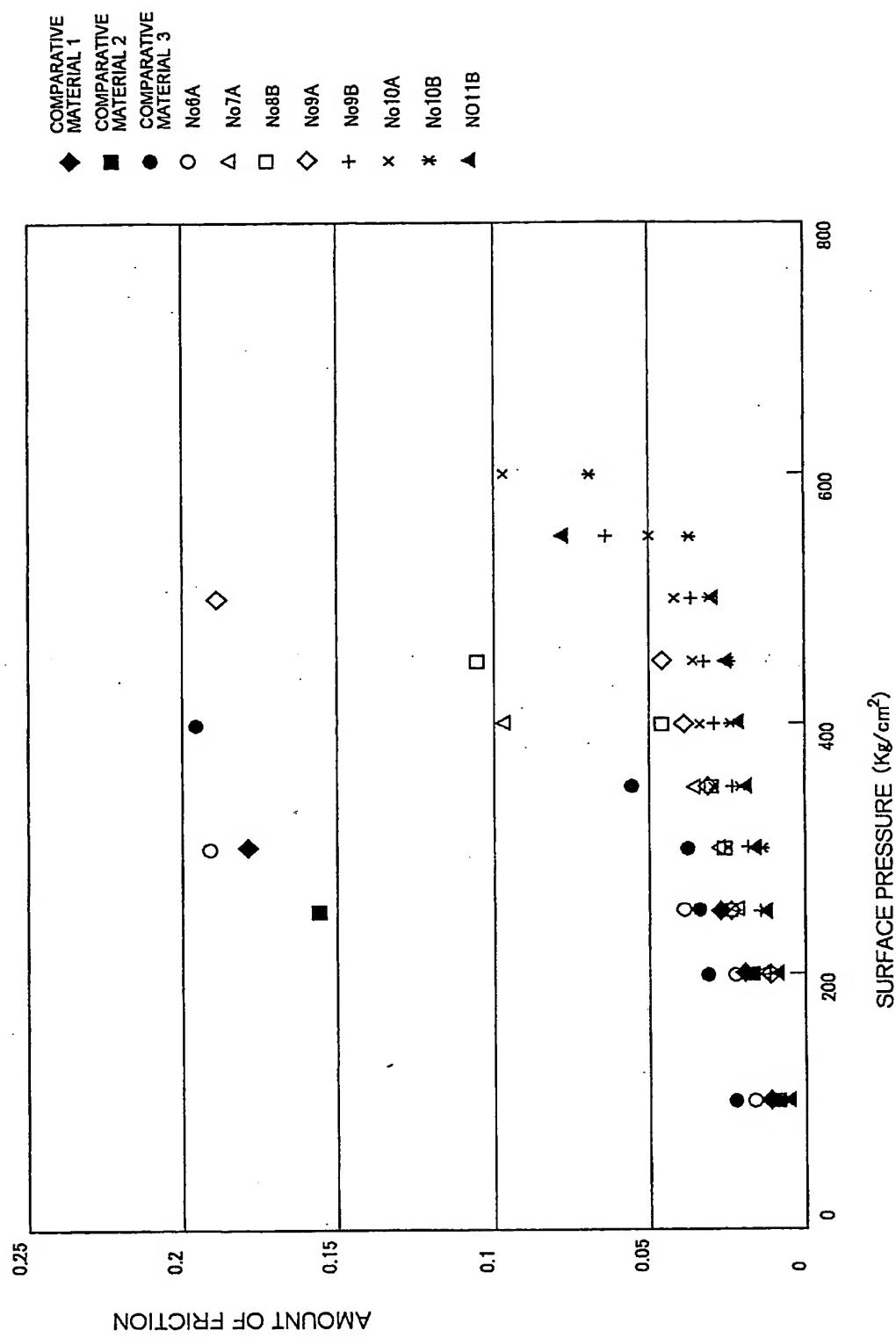


FIG. 10

(UNIT :mm)

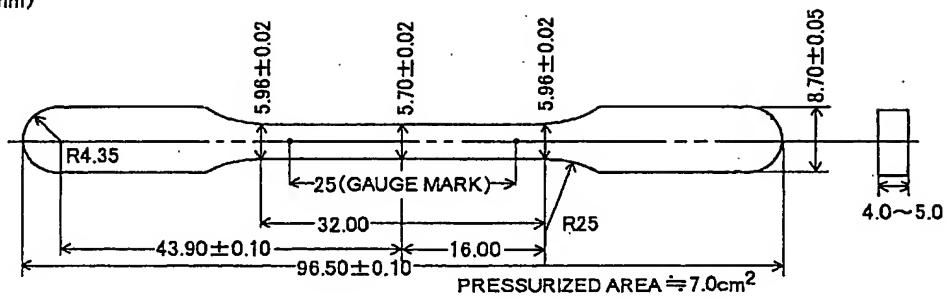


FIG. 11

SINTERING PROPERTIES OF FeAlCu BASE MATERIALS (1140°C)

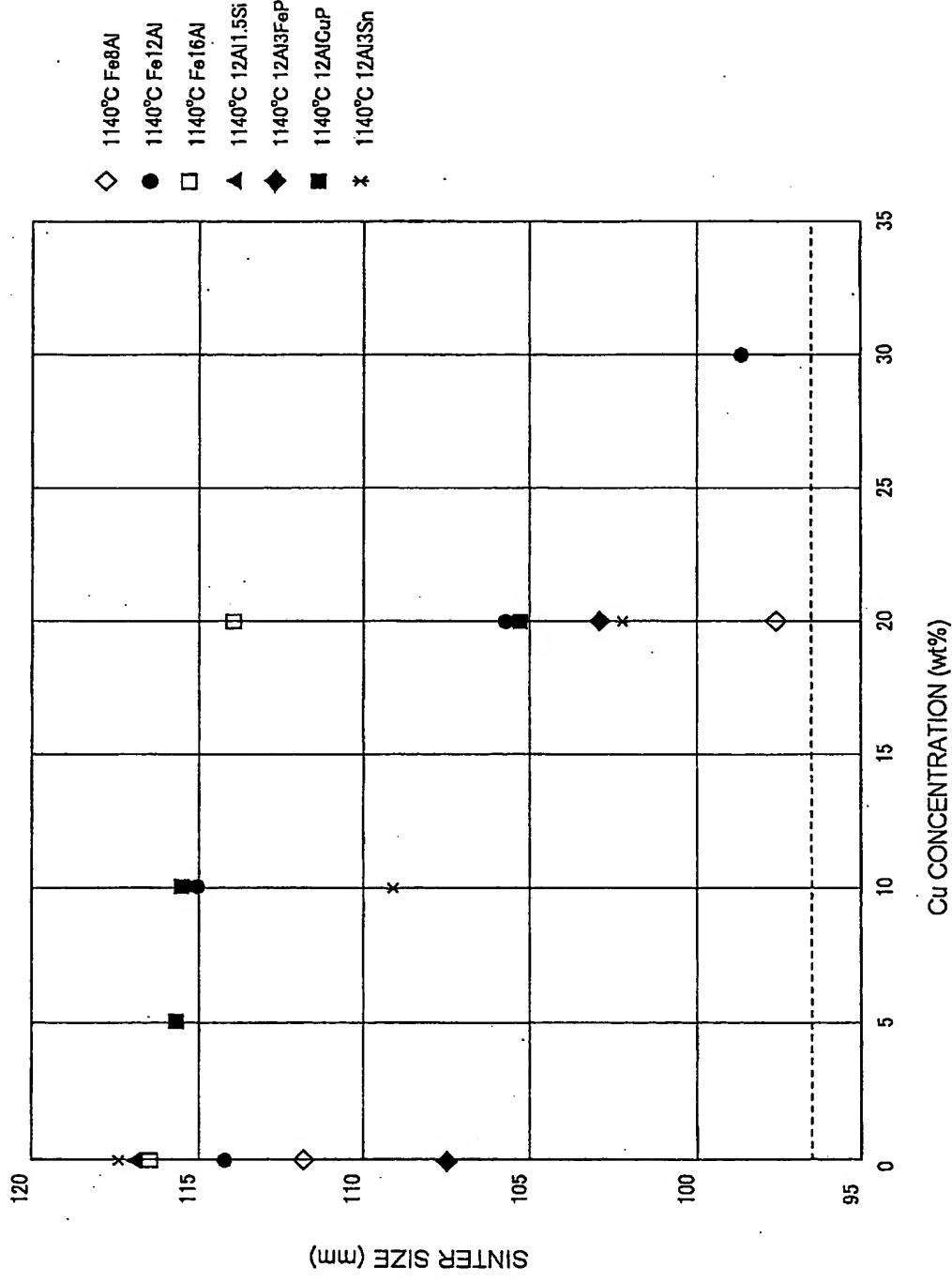


FIG. 12

SINTERING PROPERTIES OF FeAlCu BASE MATERIALS (1200°C)

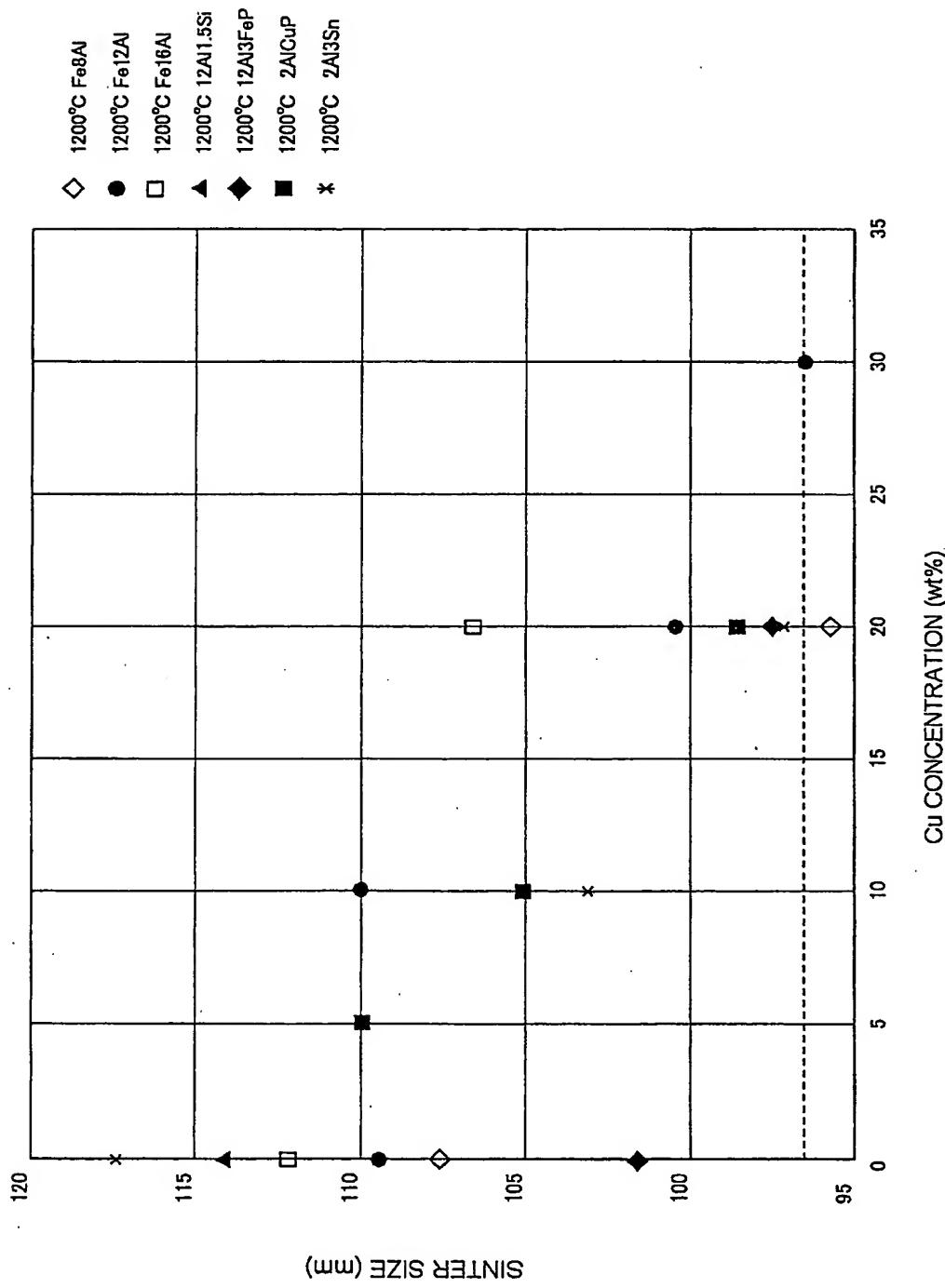


FIG. 13

SINTERING PROPERTIES OF FeAlCu BASE MATERIALS (1250°C)

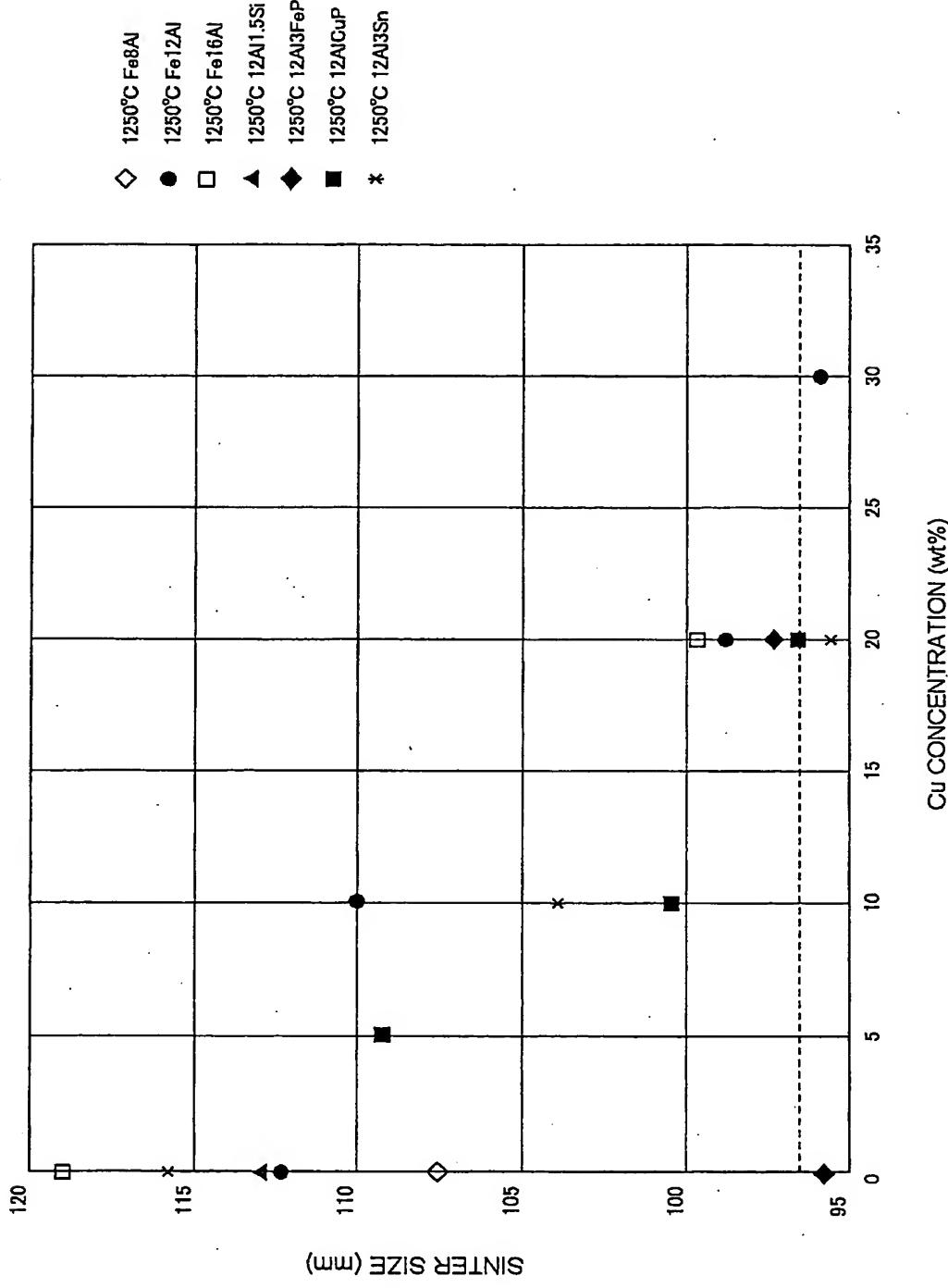


FIG. 14 SINTERED STRUCTURES OF VARIOUS Fe  
ORDERED PHASE SINTERED ALLOYS

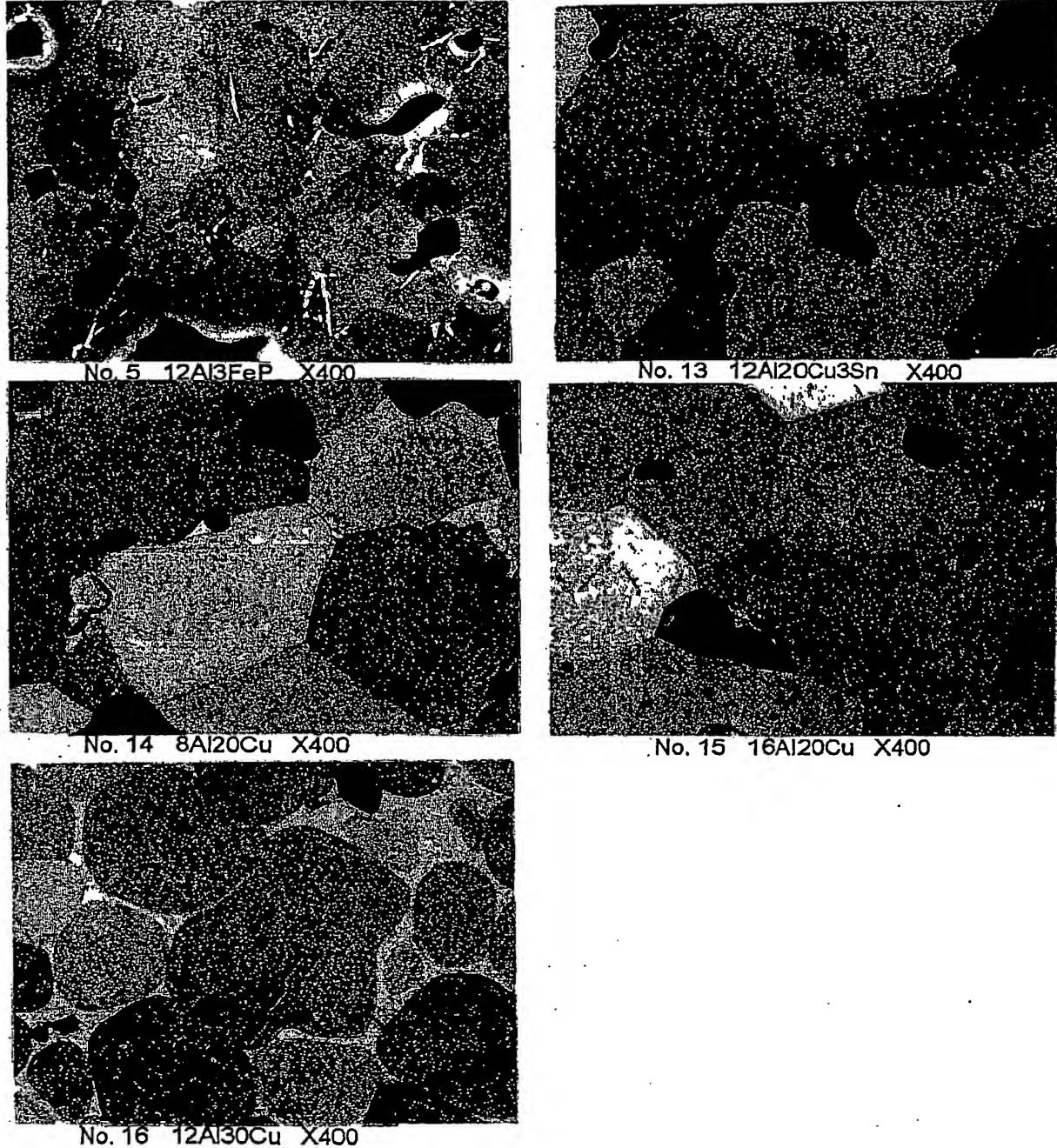


FIG. 15 EFFECTS OF Si, Ni, Co, FeAl ALLOYS UPON SINTER-CONTRACTIBILITY

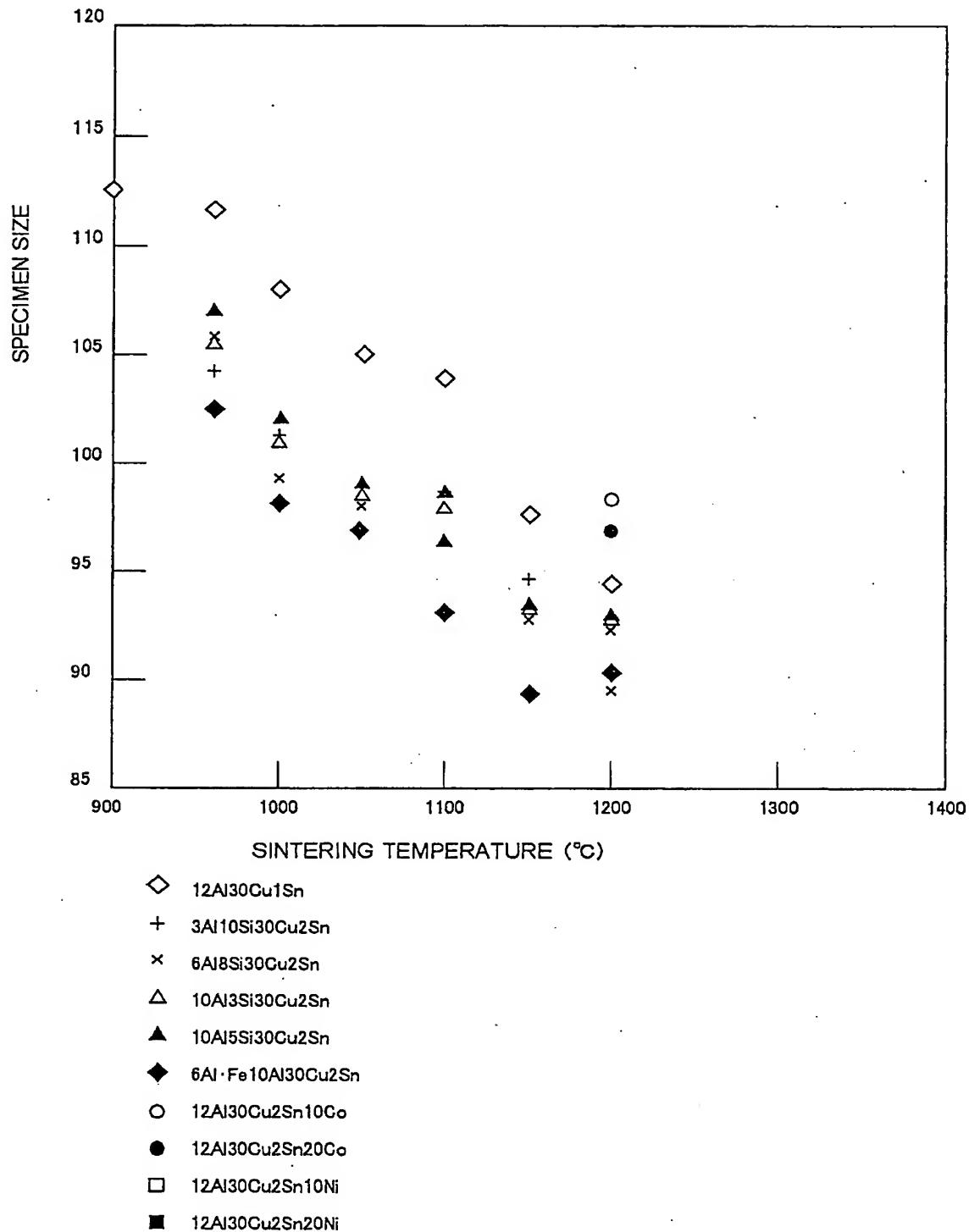


FIG. 16 SEIZURE RESISTANCE OF Fe BASE ORDERED PHASE SINTERED ALLOYS (POROSITY = ABOUT 10% VOLUME)

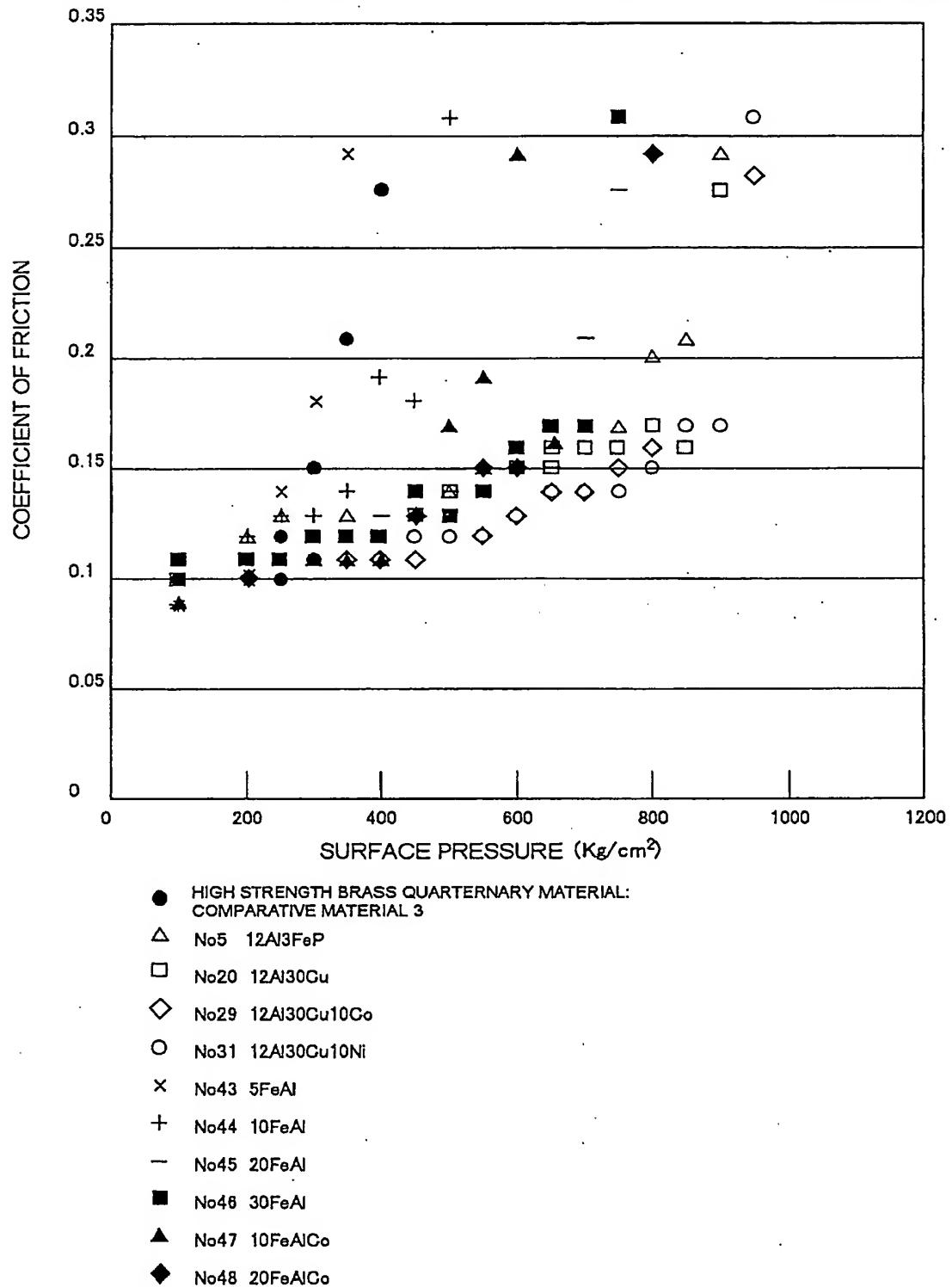


FIG. 17

SEIZURE RESISTANCE OF Fe BASE ORDERED PHASE SINTERED ALLOYS (POROSITY = ABOUT 20% VOLUME)

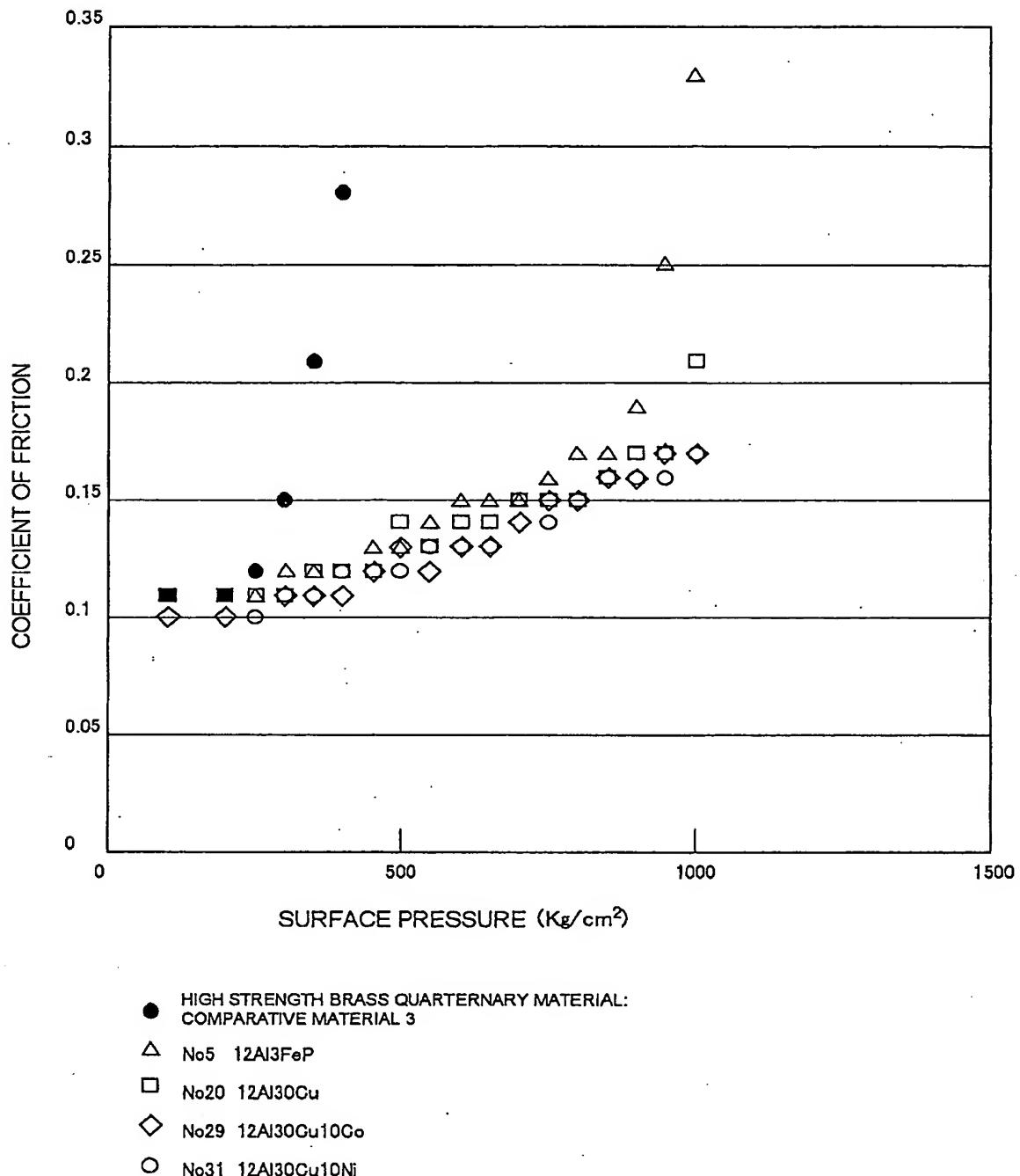
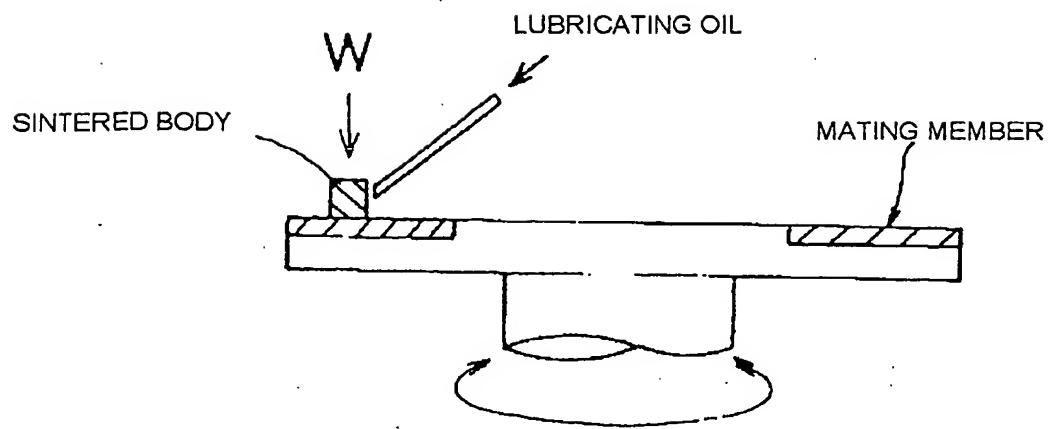


FIG. 18



TEST CONDITIONS

MATING MEMBER: CARBURIZED AND QUENCHED SCM 420

SURFACE HARDNESS:  $H_{RC}$  60~62

SURFACE COARSENESS: 2.55 OR LESS

LUBRICATING OIL: E001, AMOUNT OF OIL: 250cm<sup>3</sup> /min.

OIL TEMPERATURE: 60 °C

CIRCUMFERENTIAL SPEED: 10m/sec.

SURFACE PRESSURE: max 800kg/cm<sup>2</sup>

(50kg/cm<sup>2</sup> for each time)

FIG. 19

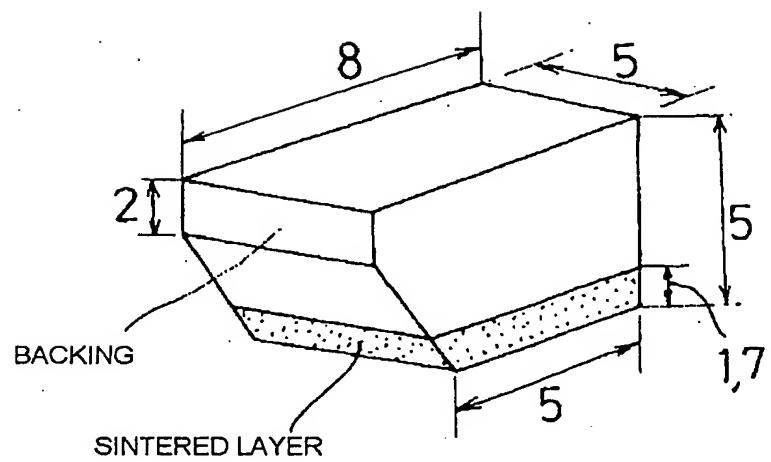
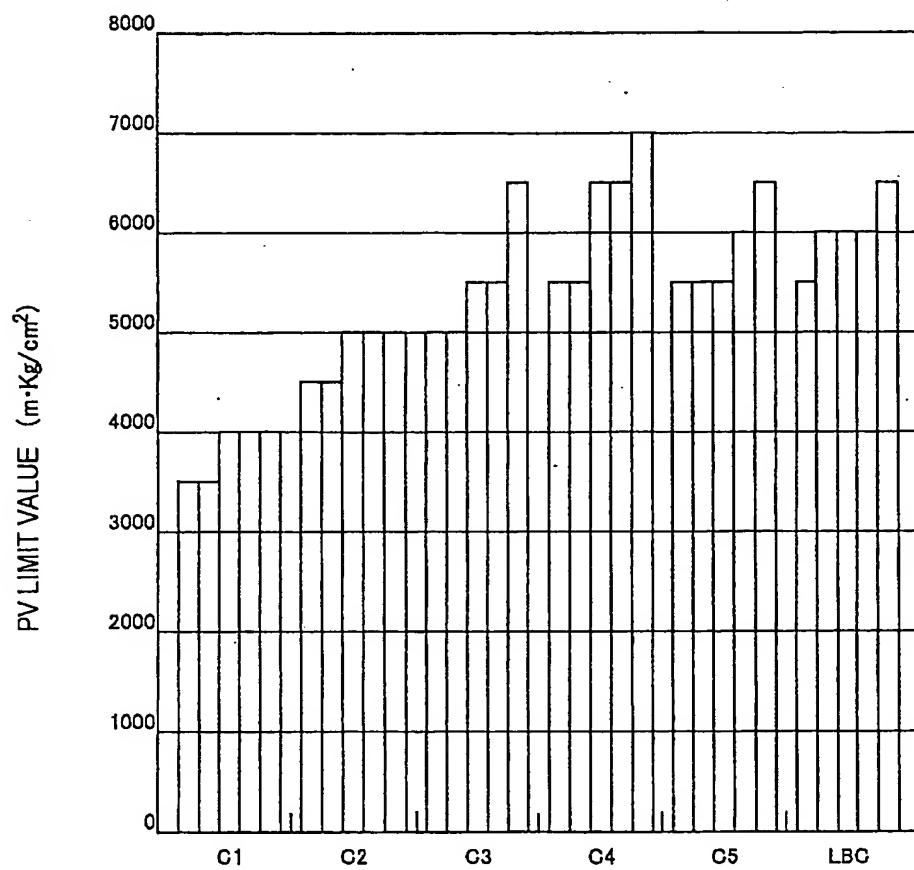


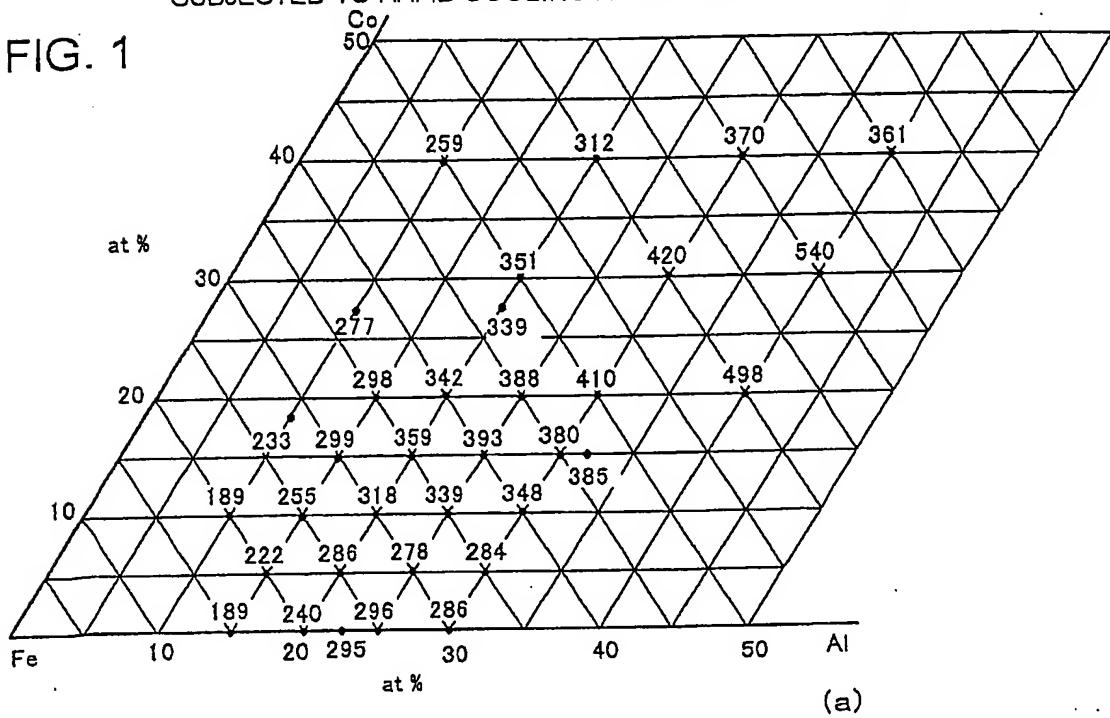
FIG. 20

SLIDING PROPERTIES OF Fe BASE SINTERED MATERIALS



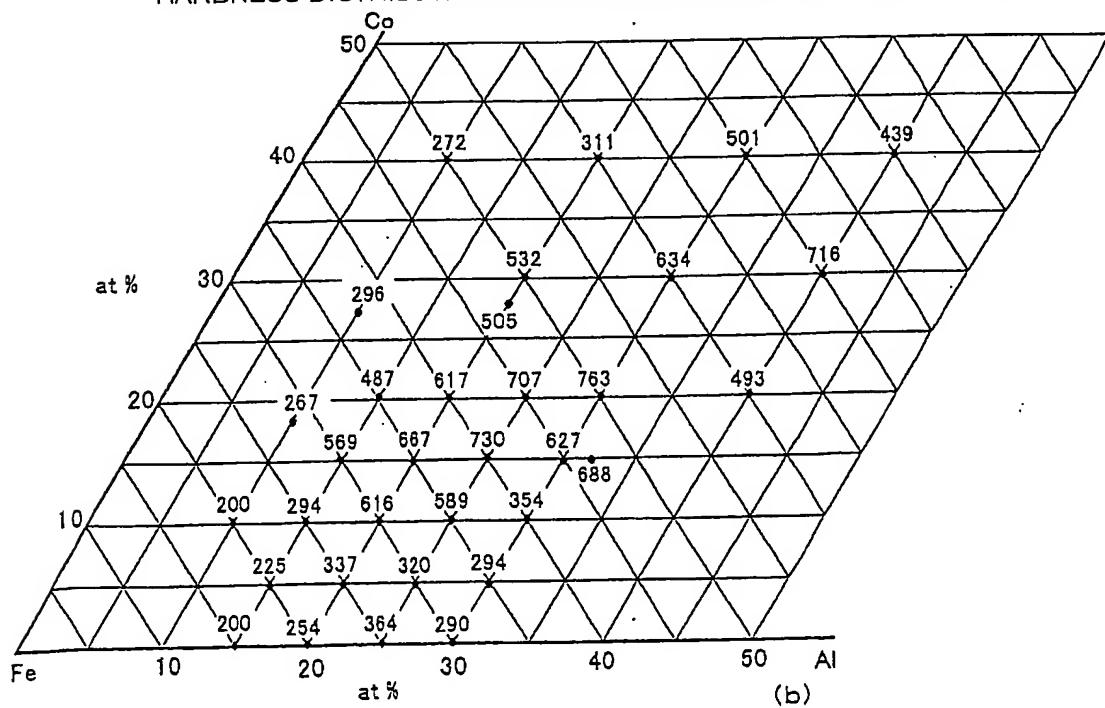
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(b)

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EFFECT OF ADDITION OF Co UPON HARDNESS OF Fe-Al ALLOYS

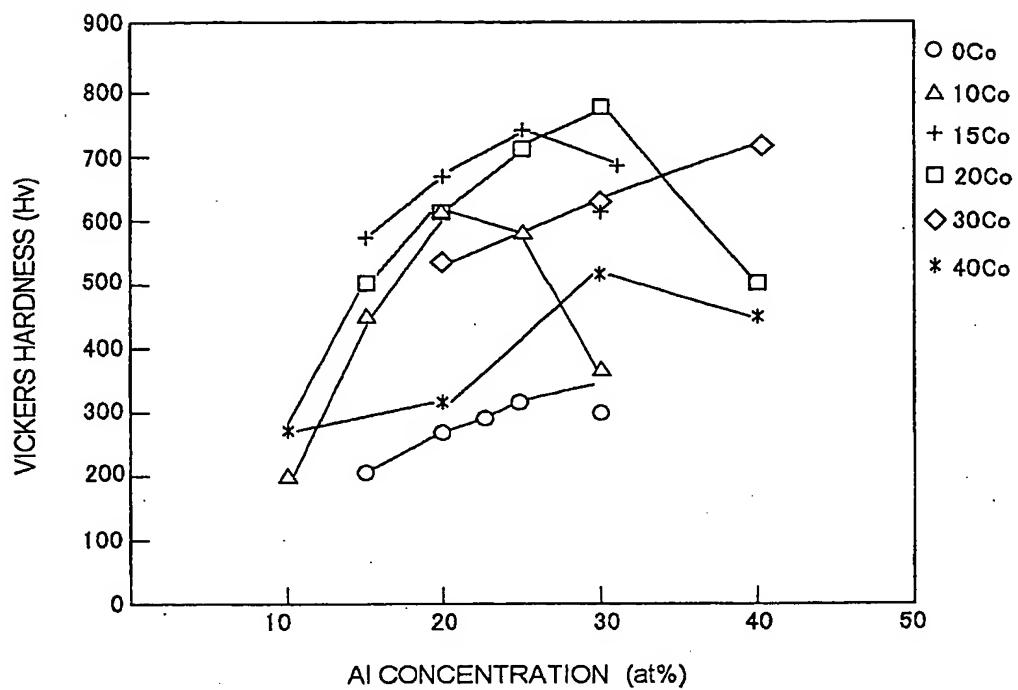


FIG. 3

CURIE TEMPERATURE OF Fe-Al-10AT% Co ALLOYS

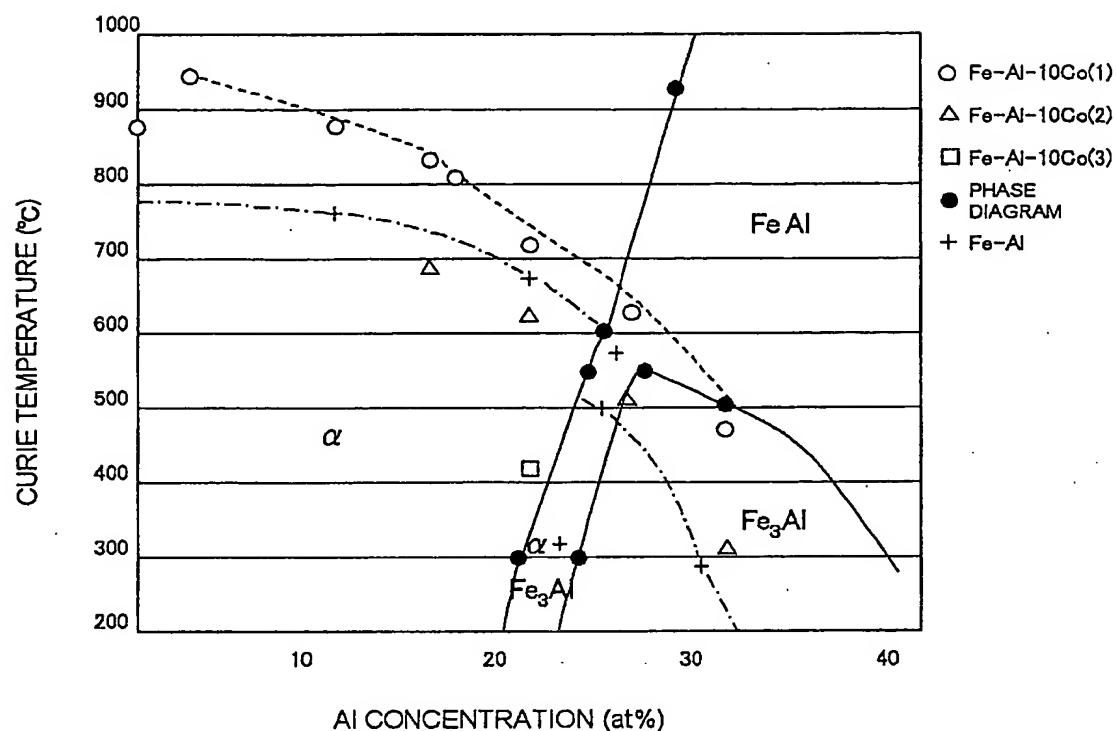


FIG. 4

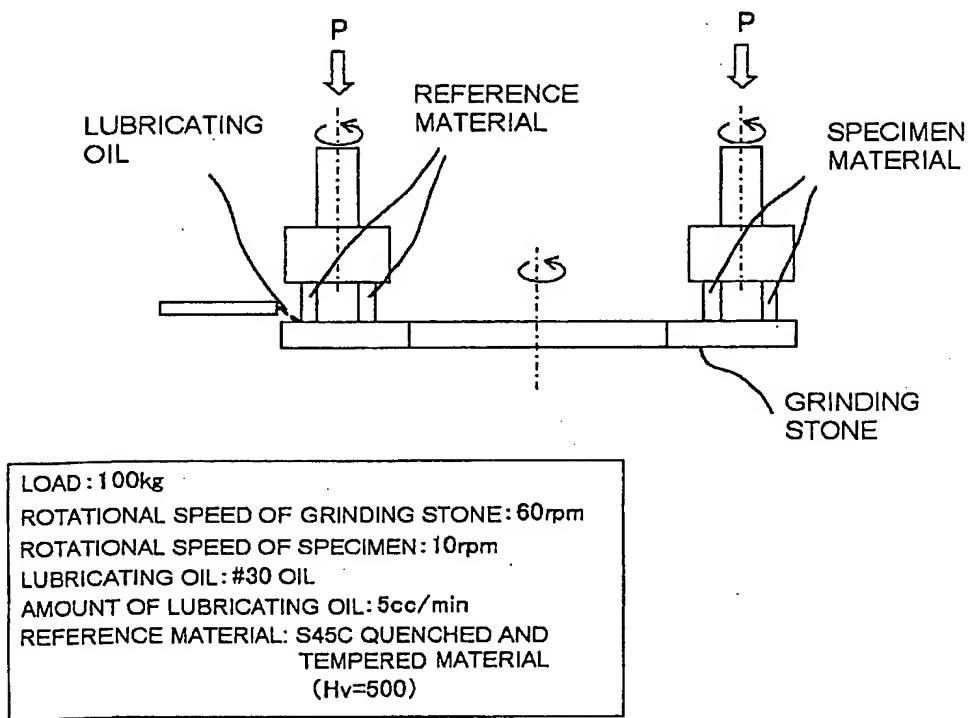


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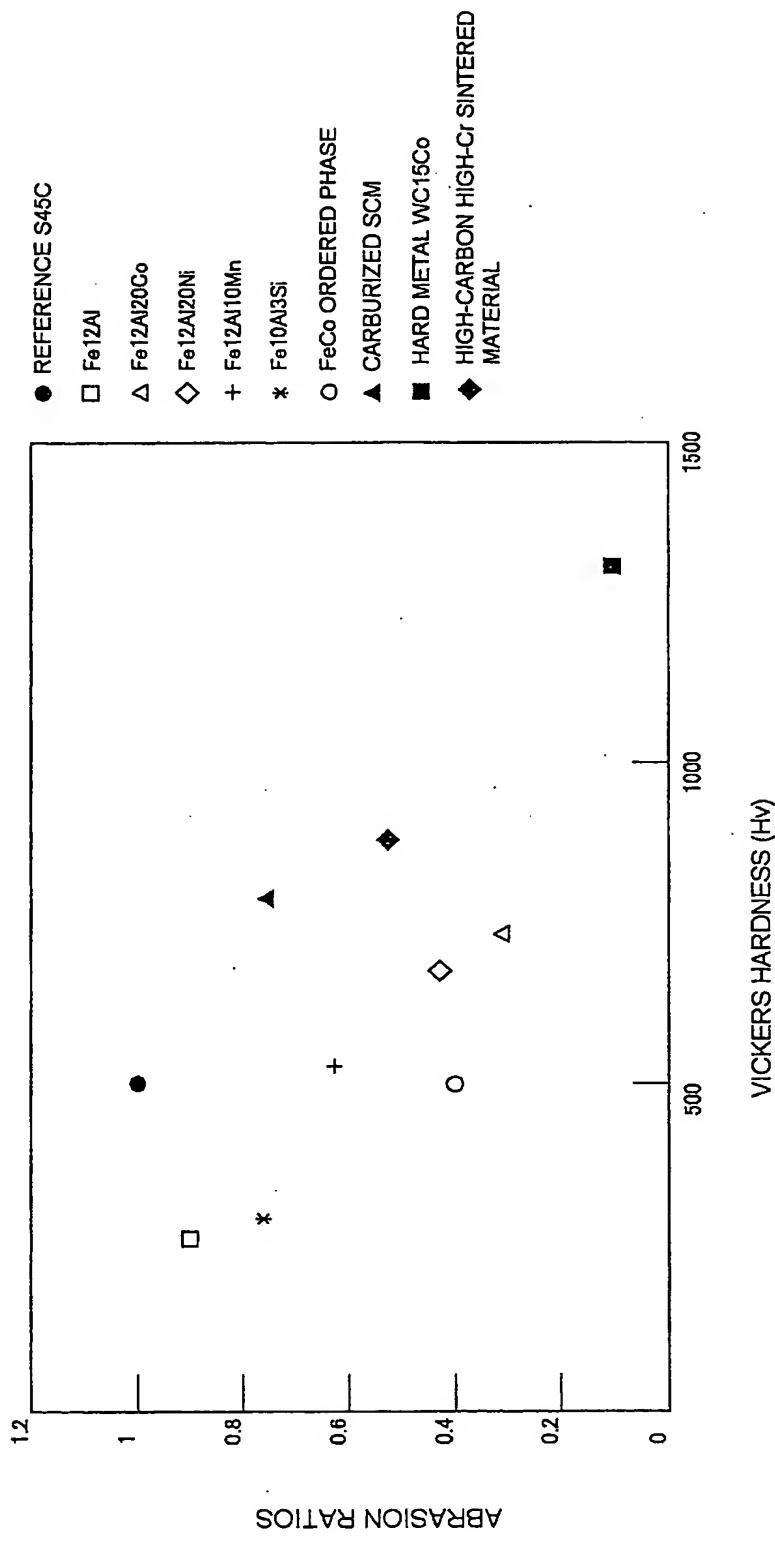


FIG. 6

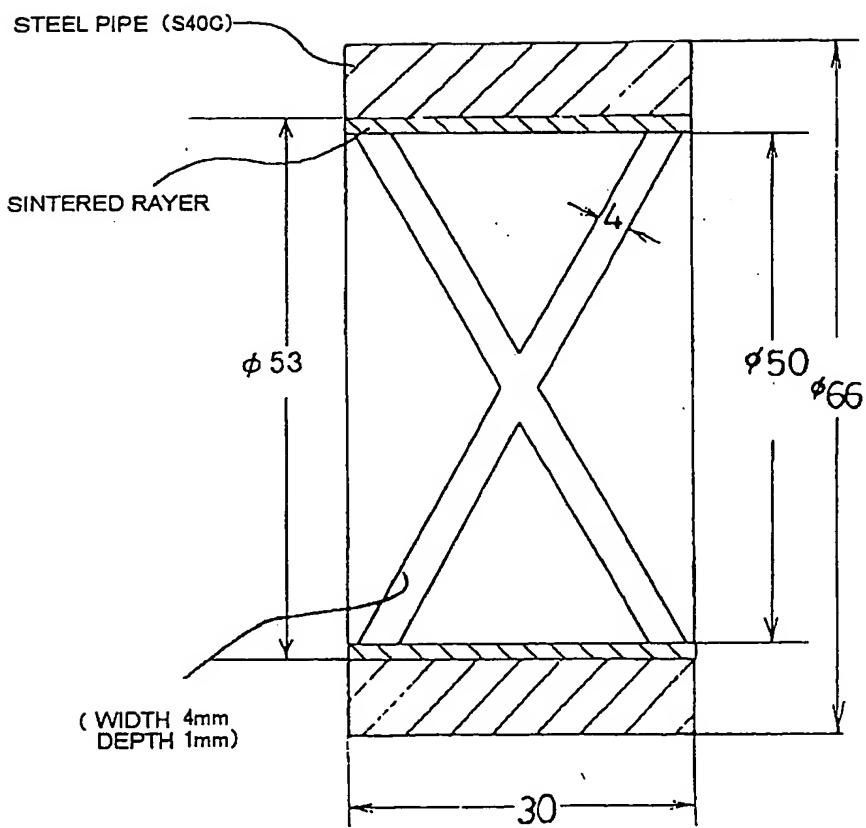


FIG. 7

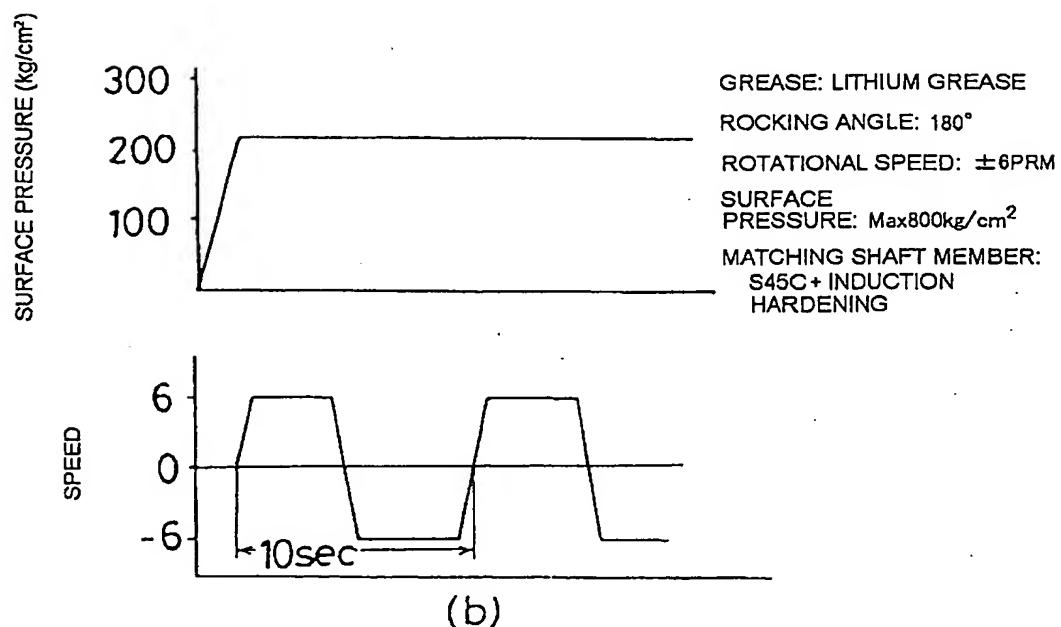
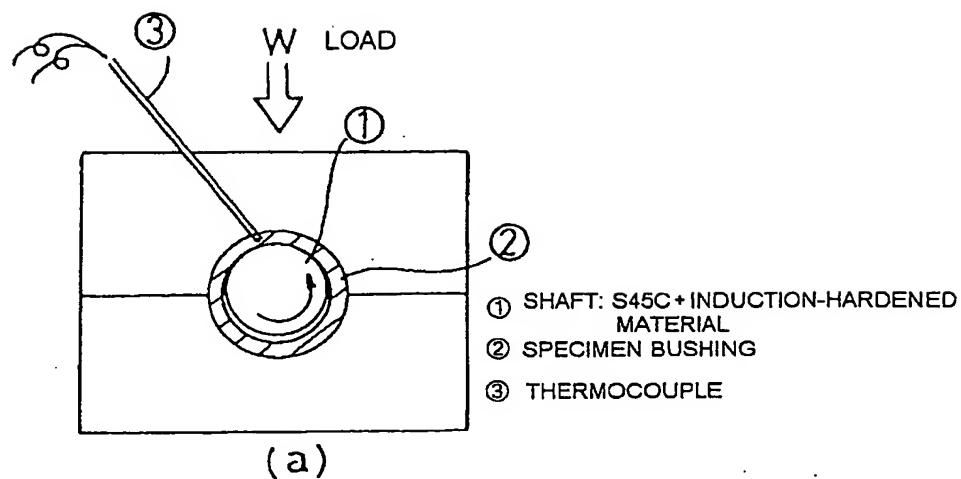


FIG. 8  
COEFFICIENTS OF SLIDING CONTACT FRICTION  
OF Fe BASE ORDERED PHASE MATERIALS

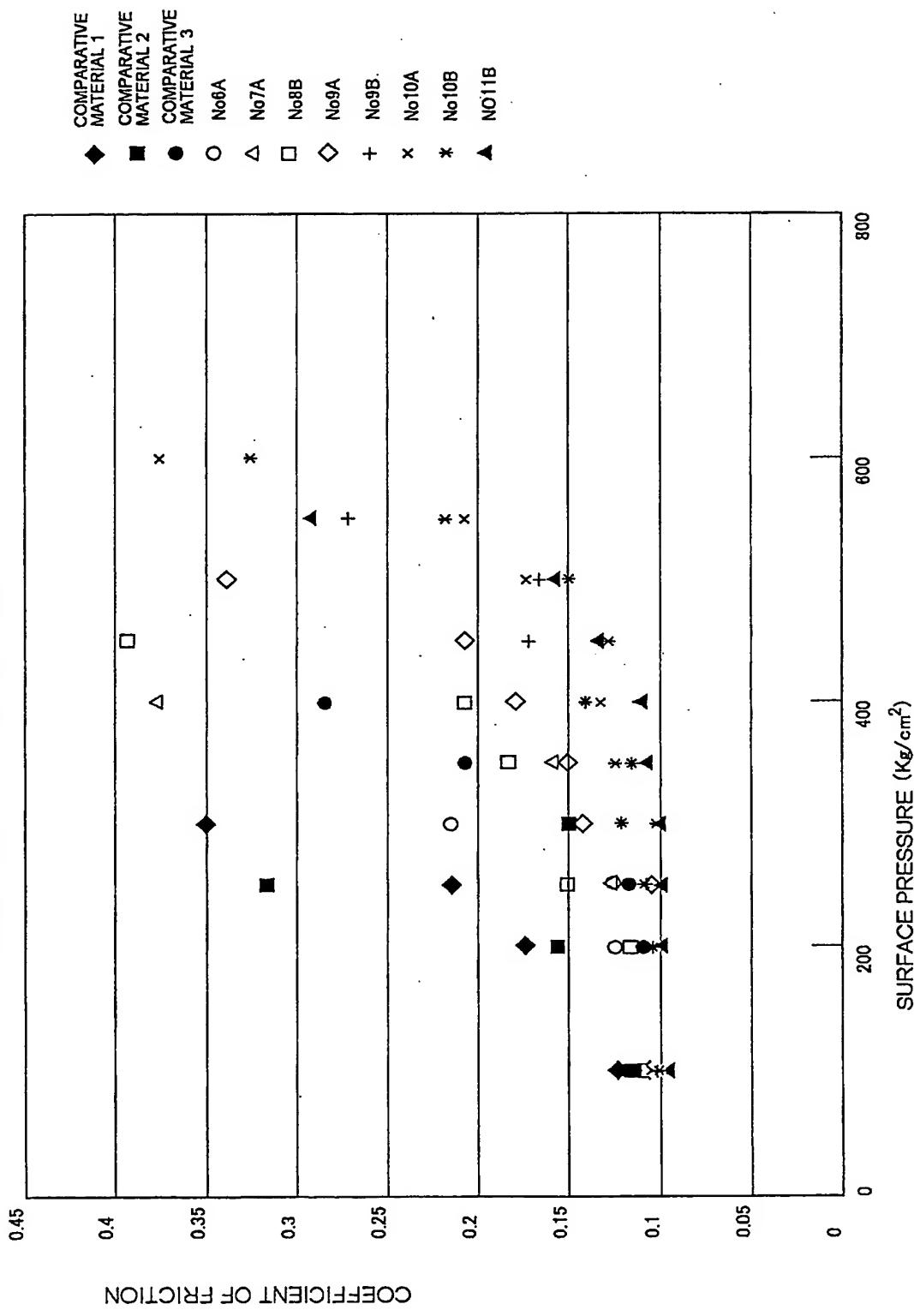


FIG. 9 SLIDING ABRASION AMOUNTS OF Fe BASED DIFFERENT PHASE MATERIALS

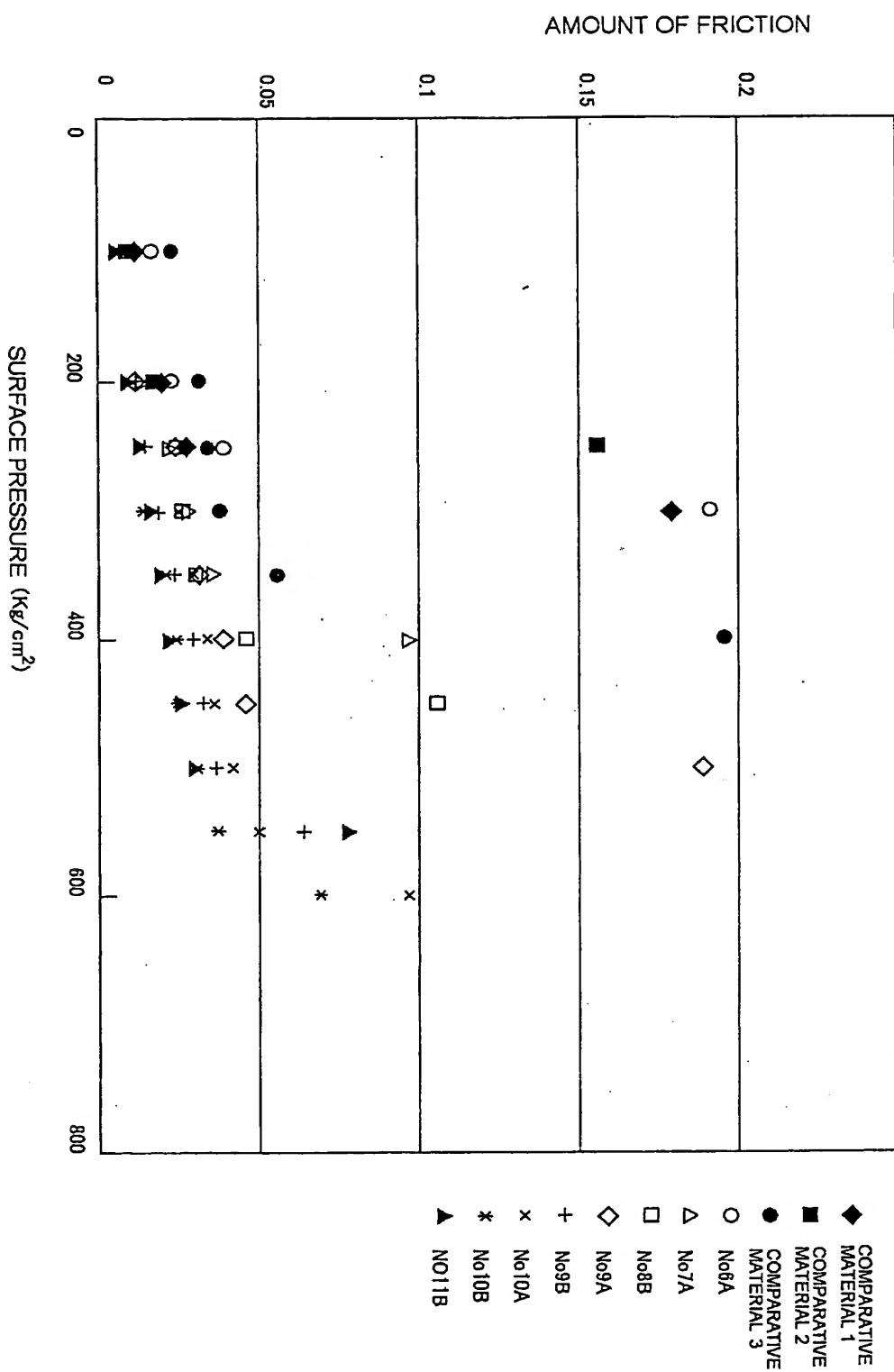


FIG. 10

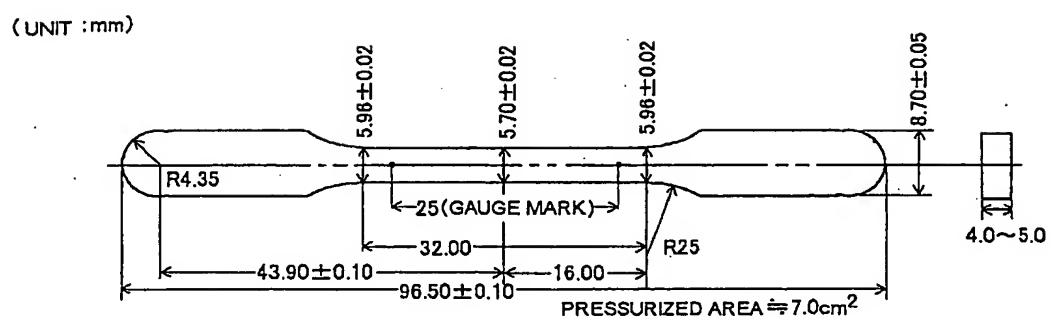


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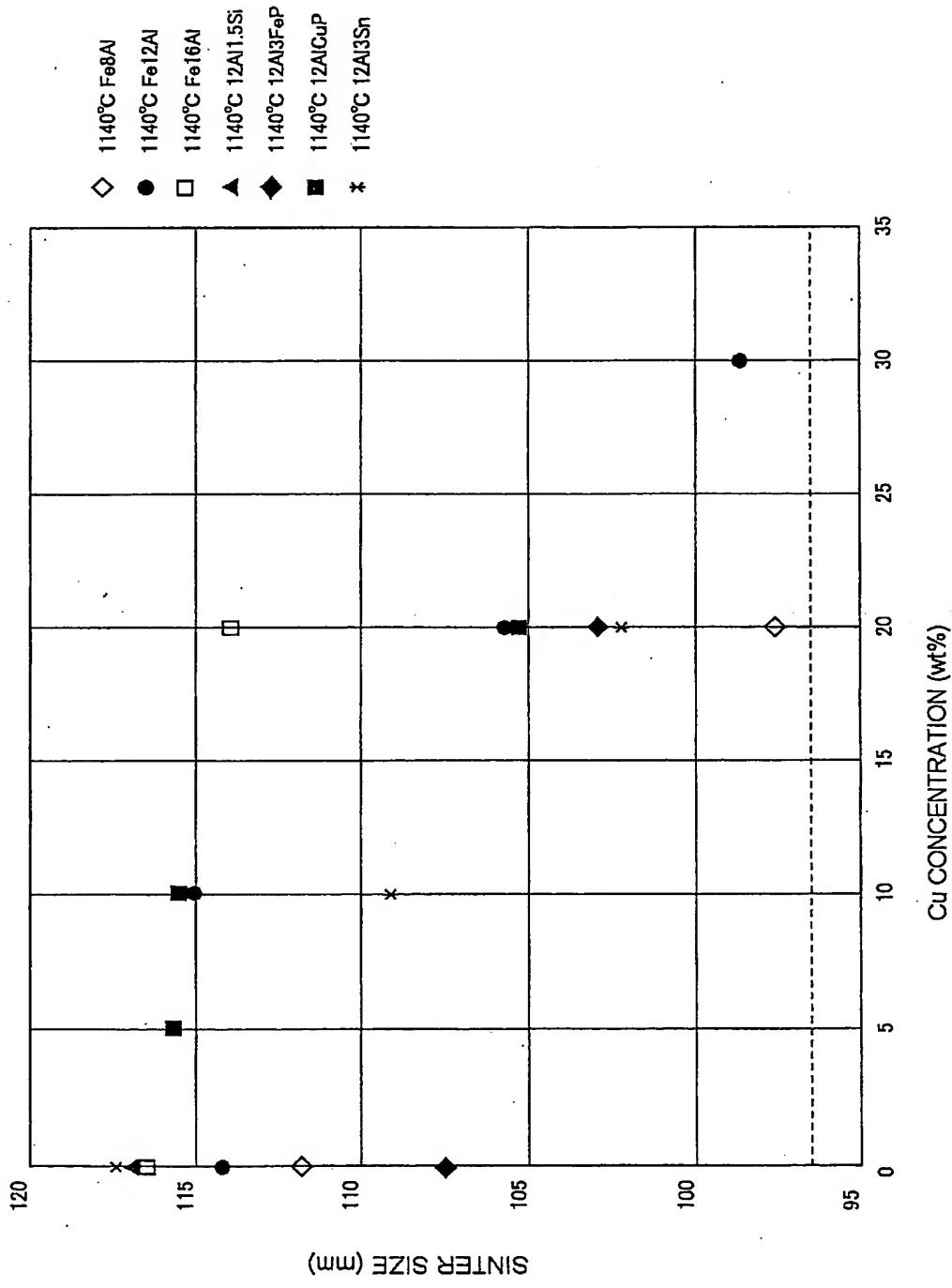


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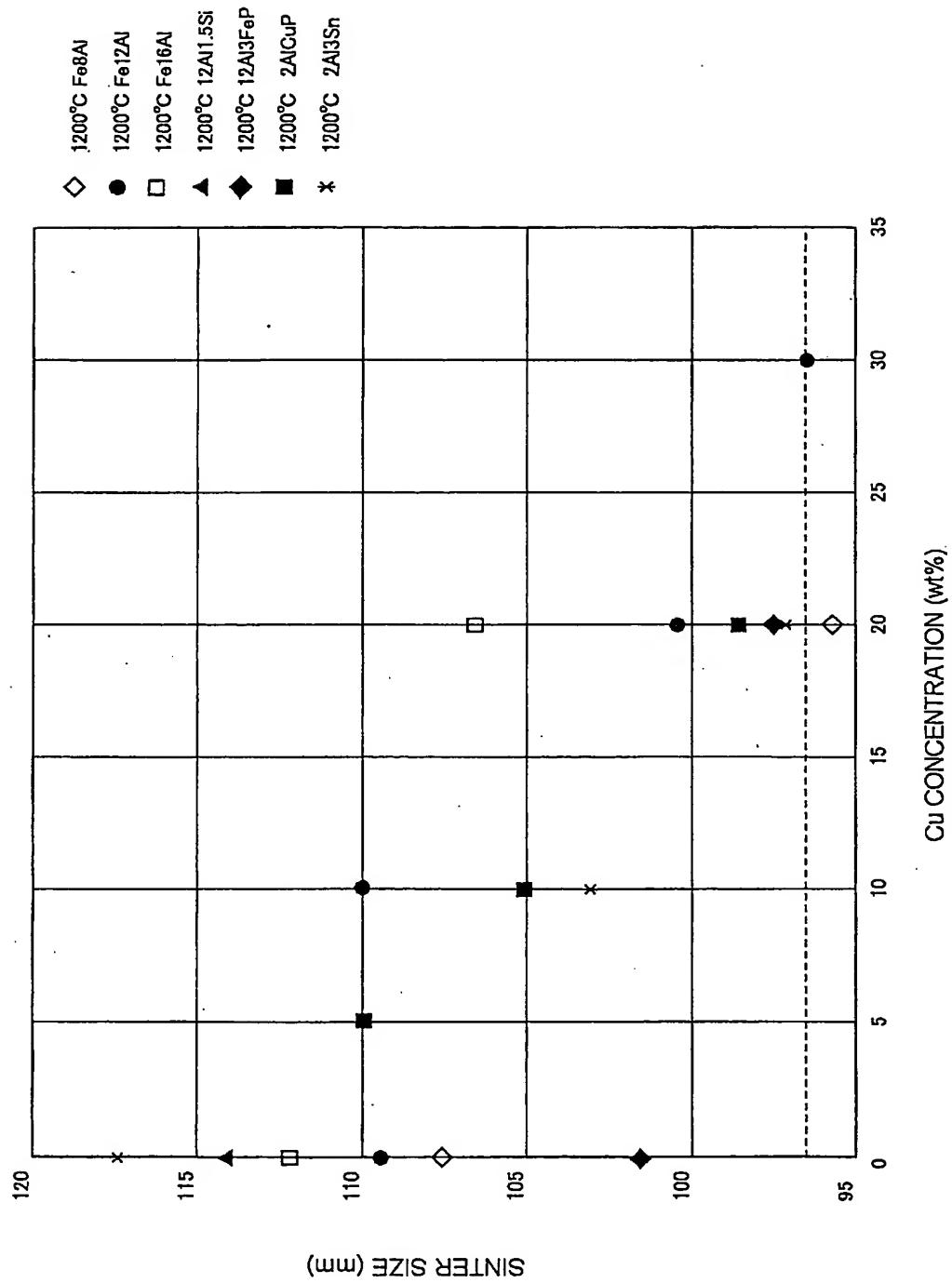


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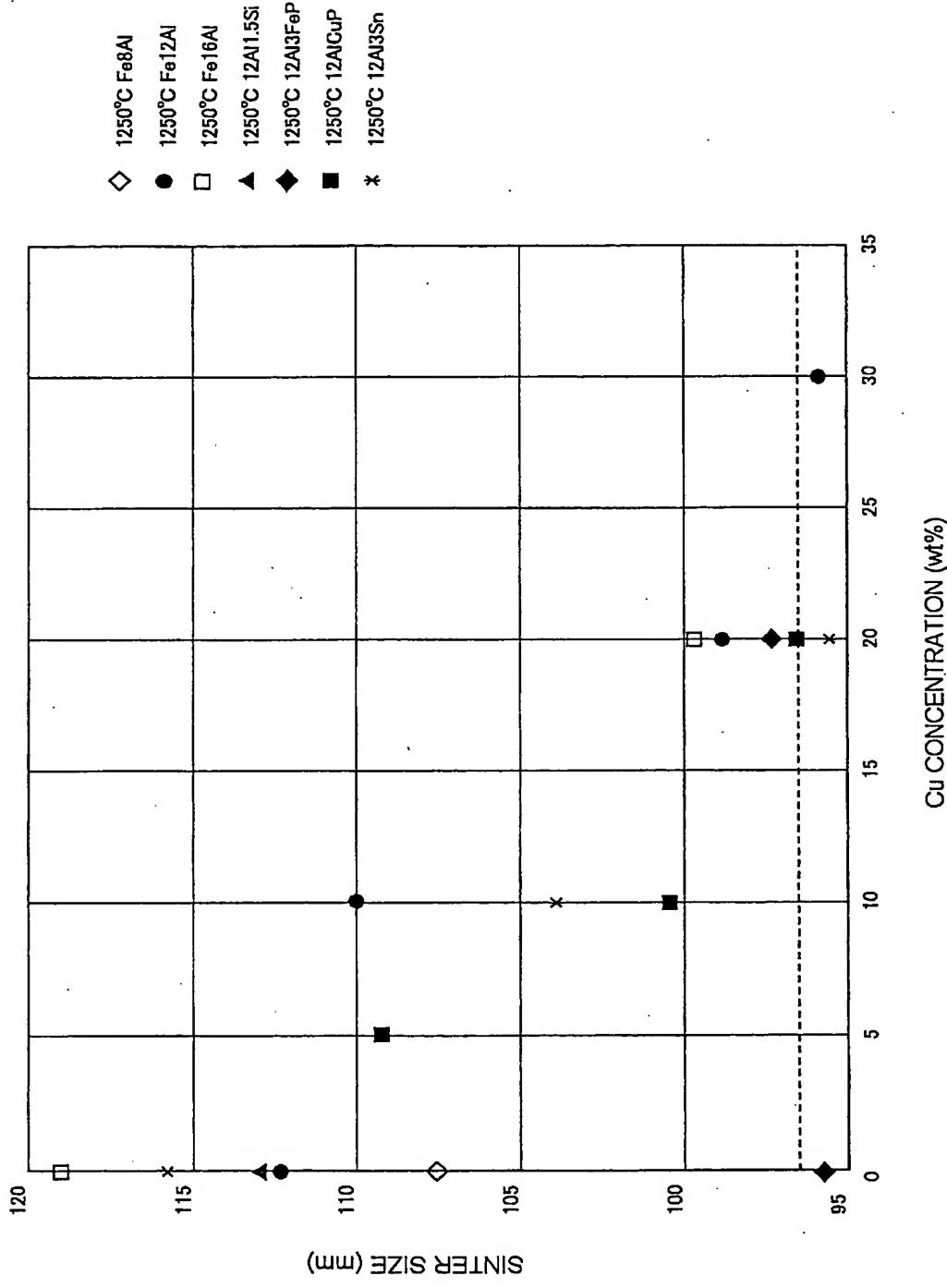


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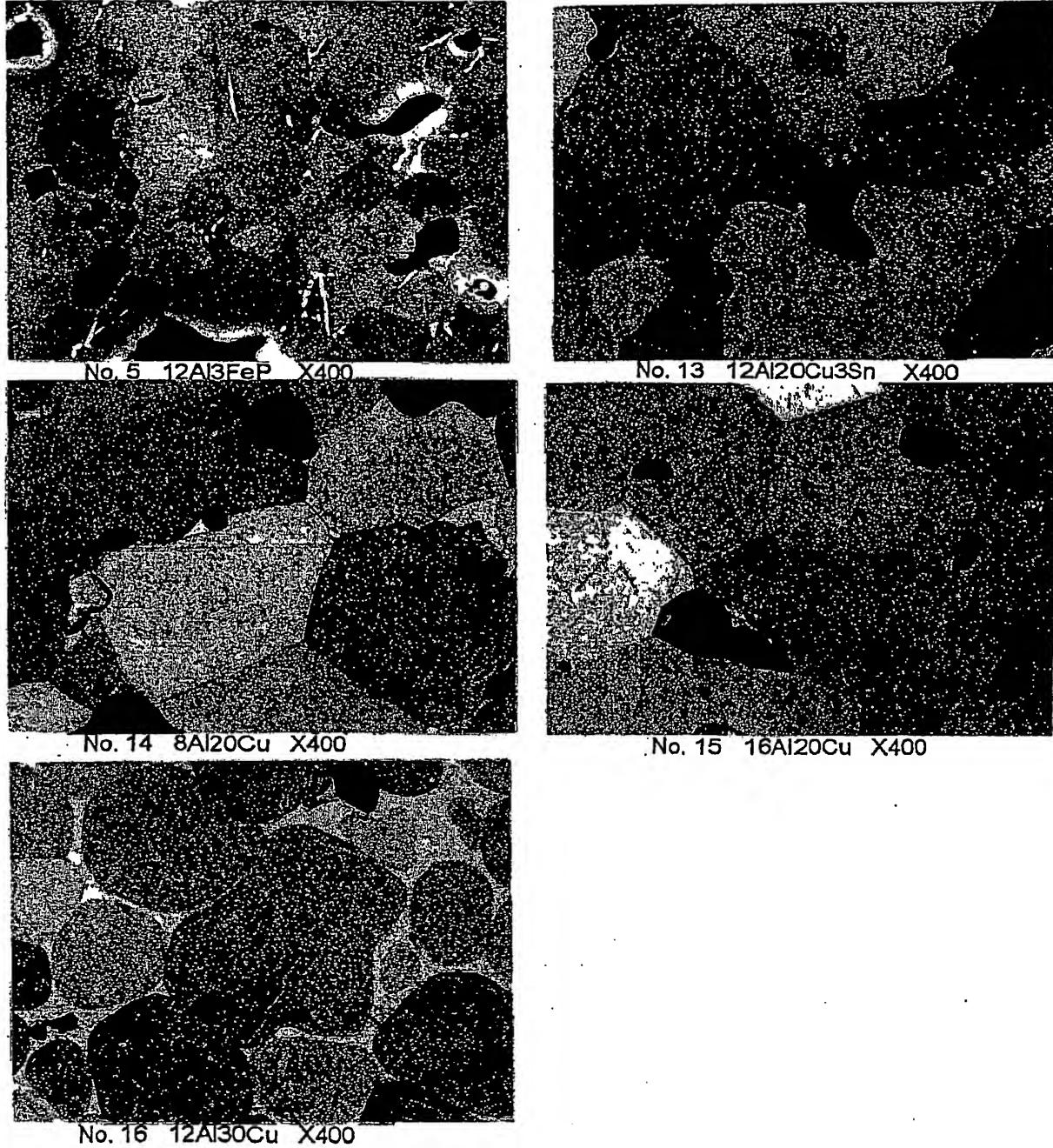


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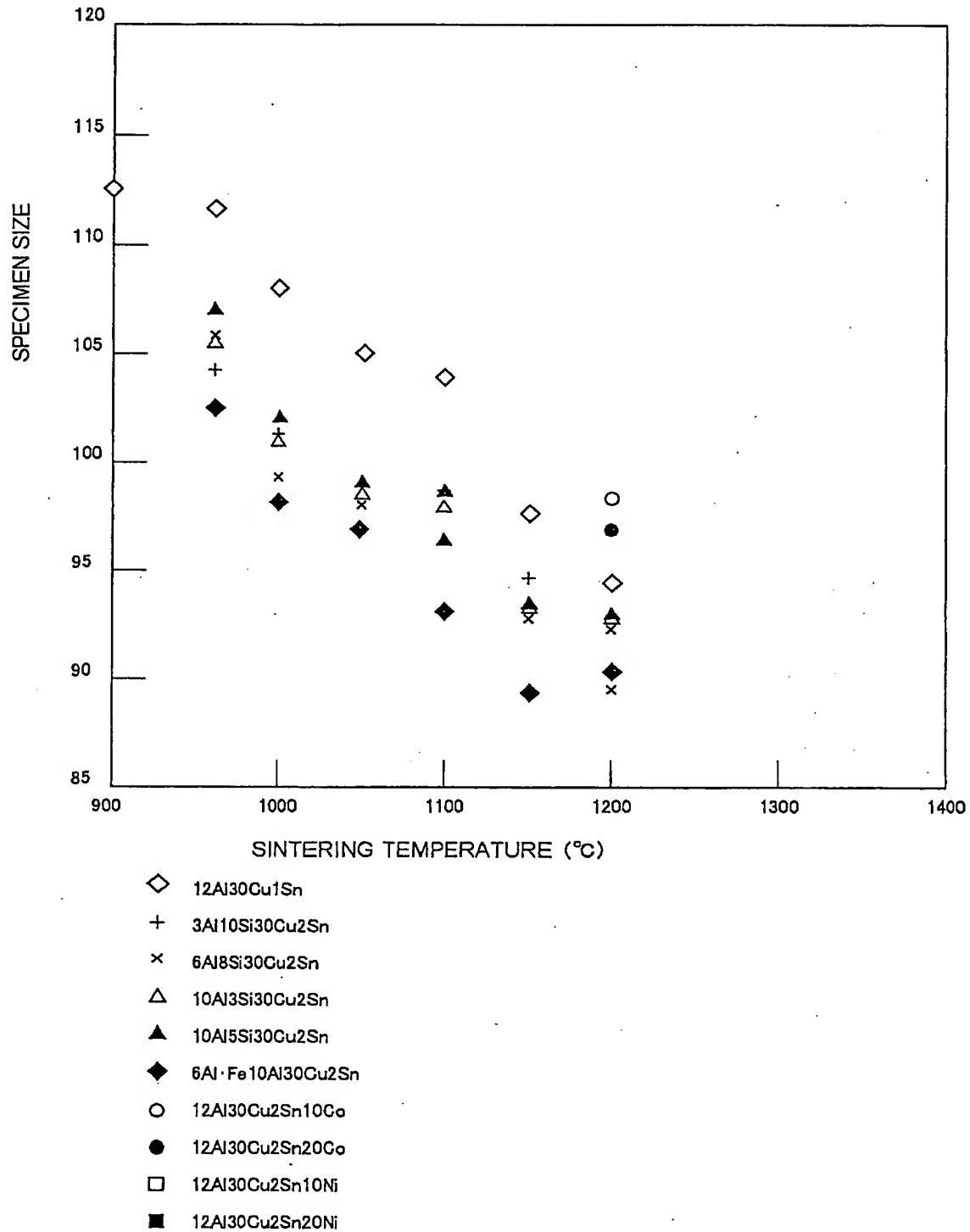


FIG. 16

SEIZURE RESISTANCE OF Fe BASE ORDERED PHASE SINTERED ALLOYS (POROSITY = ABOUT 10% VOLUME)

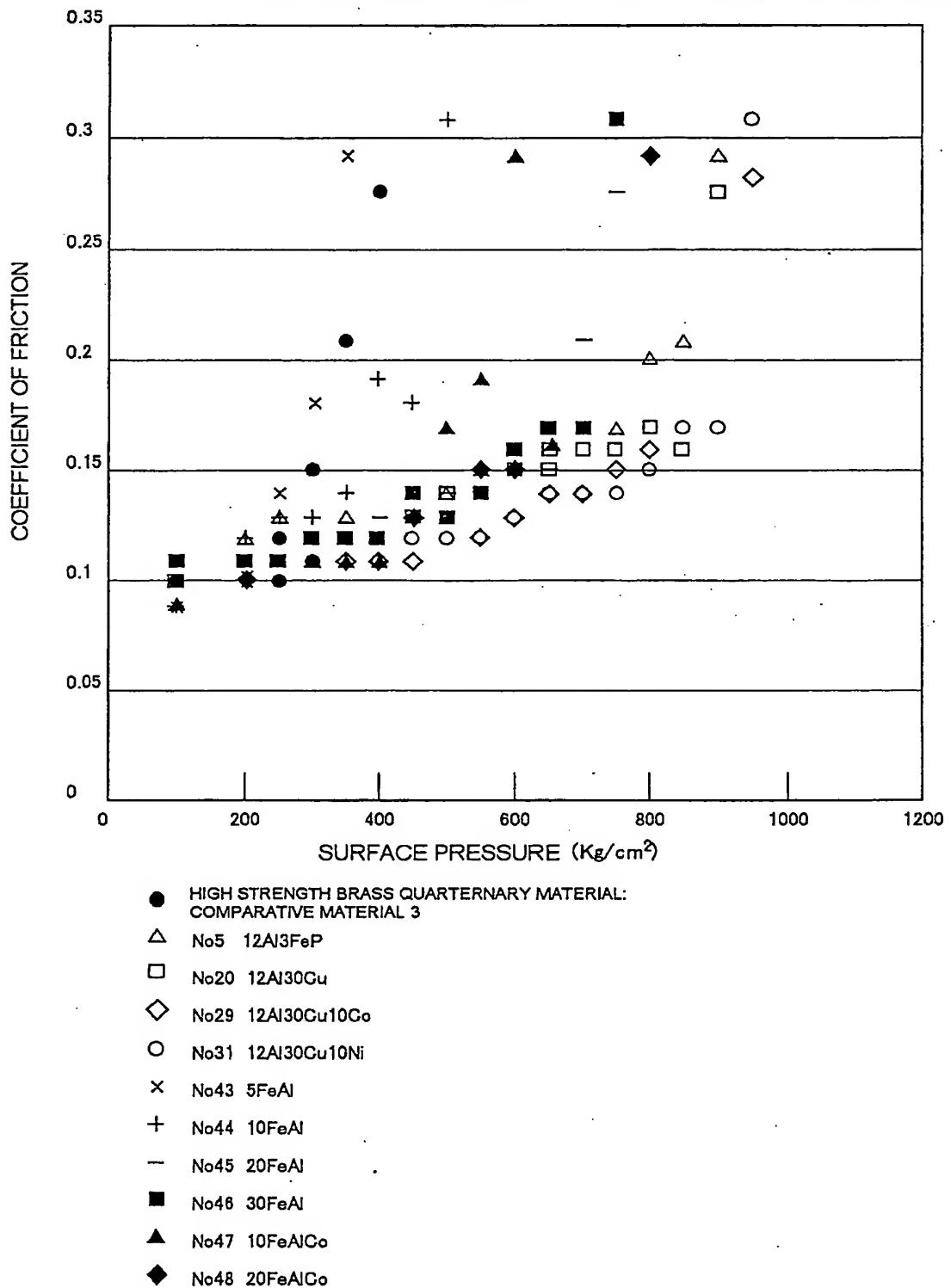


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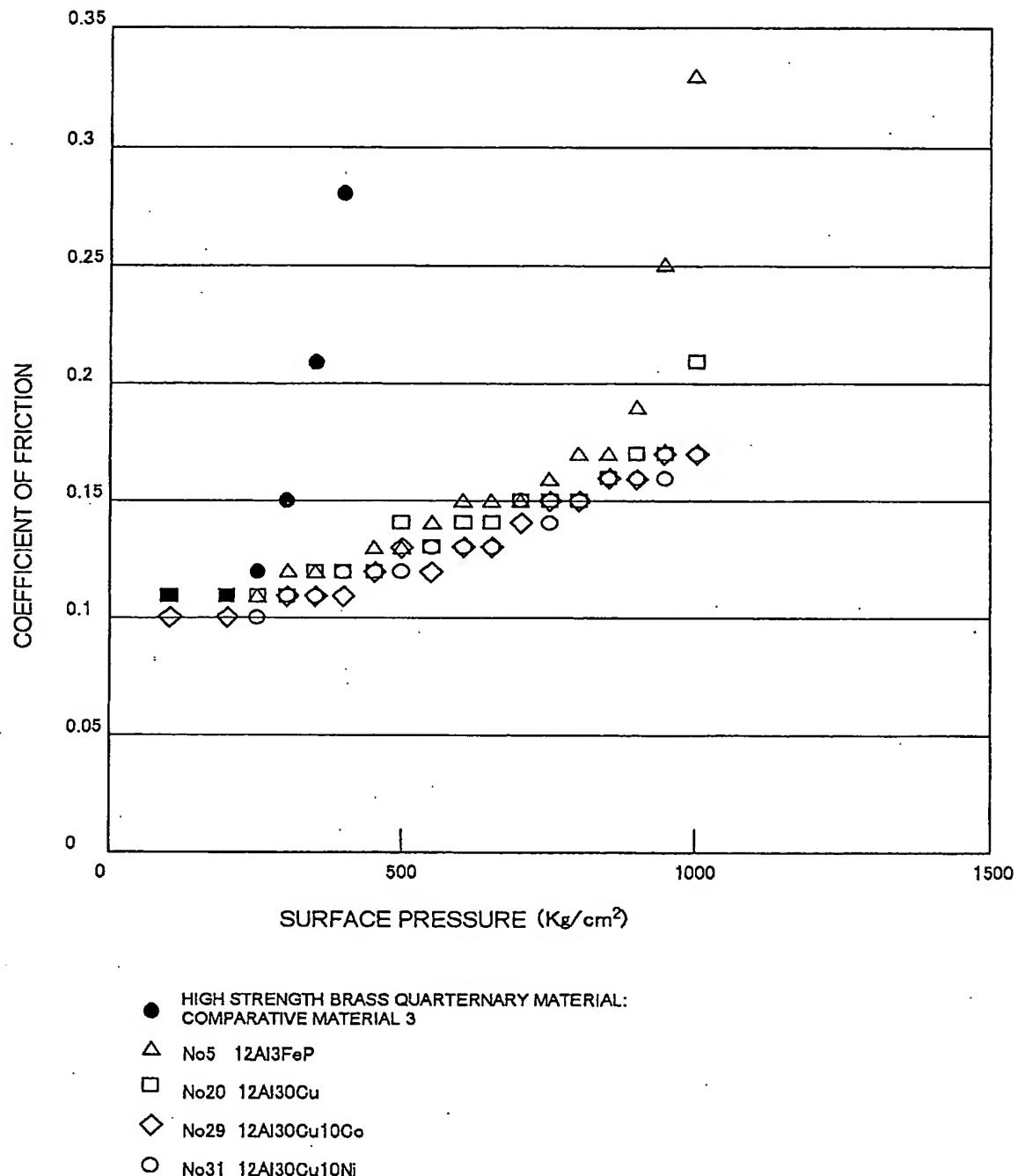
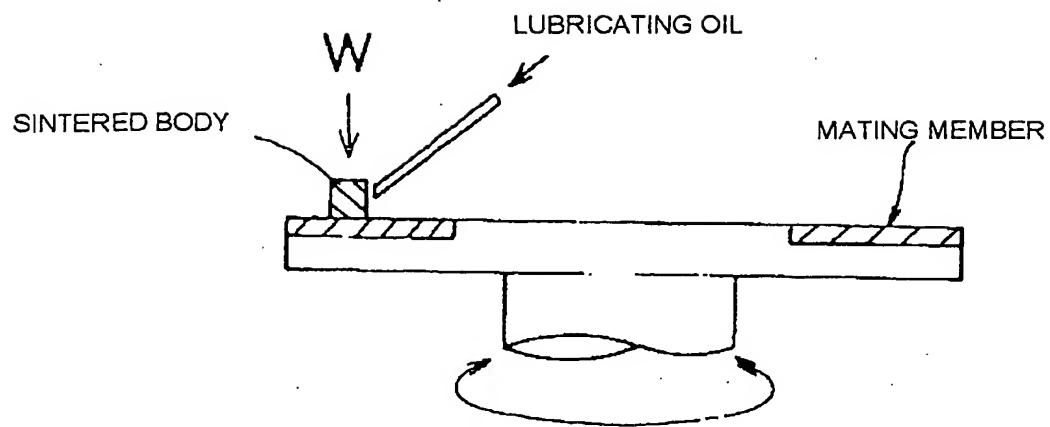


FIG. 18



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(50kg/cm<sup>2</sup> for each time)

FIG. 19

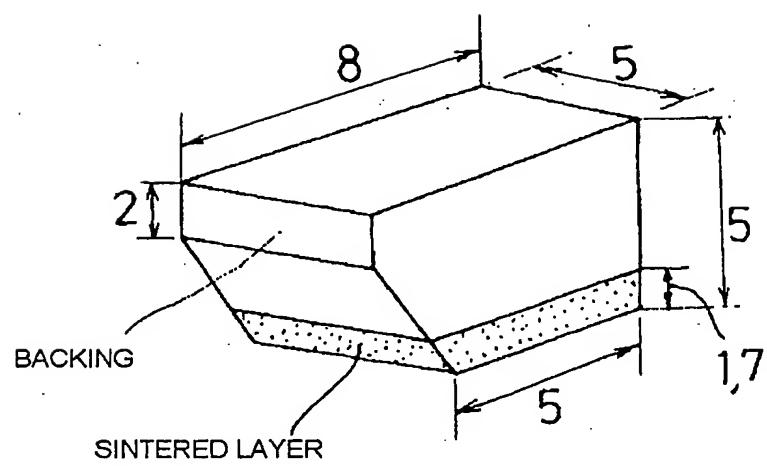


FIG. 20

